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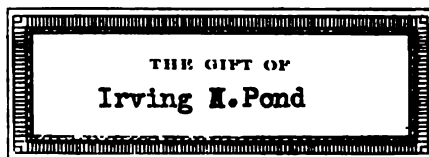
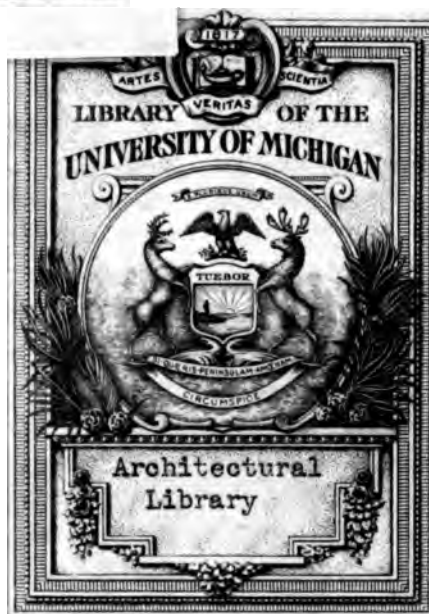
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*Good and Bad*

# THE RAILWAY TERMINAL PROBLEM OF CHICAGO



A Series of Addresses before the City  
Club dealing with the Problem of Re-  
organizing Chicago's Railway Terminals  
1913



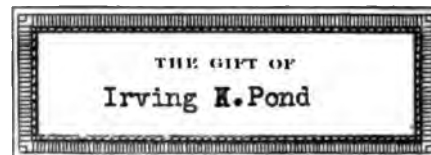
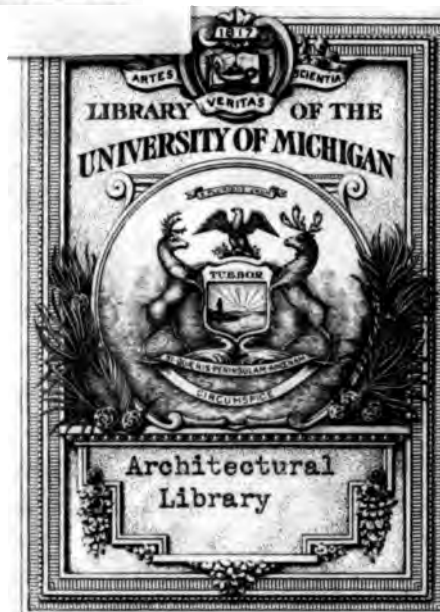
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**THE CITY CLUB OF CHICAGO  
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**315 PLYMOUTH COURT**

**CHICAGO**

# THE RAILWAY TERMINAL PROBLEM OF CHICAGO

A SERIES OF ADDRESSES BEFORE THE CITY CLUB, JUNE THIRD TO TENTH,  
1913, DEALING WITH THE PROPOSED RE-ORGANIZATION OF THE  
RAILWAY TERMINALS OF CHICAGO, INCLUDING ALL TER-  
MINAL PROPOSALS NOW BEFORE THE CITY COUNCIL  
COMMITTEE ON RAILWAY TERMINALS

ILLUSTRATED

PUBLISHED BY  
THE CITY CLUB OF CHICAGO  
315 PLYMOUTH COURT, CHICAGO  
SEPTEMBER, 1913

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Drawing K. Pond  
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## FOREWORD

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**T**HE present crisis in the railway terminal situation in Chicago was brought about by the announcement of plans by the Union Station Company and the Pennsylvania Railroad Company for a new passenger and a new freight terminal on the west side, together with the request of those companies for ordinance rights from the City of Chicago necessary to carry their plans into effect. The plans of the Union Station and Pennsylvania Railroad companies and the proposed ordinances have been submitted to the Railway Terminals Committee of the City Council and are now pending before that body for approval. Four other plans or proposals for terminal reorganization are also before the Committee, submitted respectively by the Executive Officers and Staff of the Chicago Plan Commission, by Mr. Jarvis Hunt, by Messrs. Pond and Pond, and by Messrs. Guenzel and Drummond.

In order that the directors and committees of the City Club might consider the situation intelligently, the City Club, in June, 1913, held a series of six meetings at which the proponents described at length their respective plans. The discussions at these meetings, with plans and drawings fully illustrating the various proposals, are printed herewith for the enlightenment of the Club membership and for the benefit of the public generally.

The outcome of the series of meetings on the terminal problem in June, was a joint recommendation by the Directors of the City Club and its Committees on Passenger Traffic, Freight Traffic, Streets, Alleys and Bridges, City Planning and Housing Conditions, to the City Council Committee on Railway Terminals that before taking action with reference to the pending ordinances the city should employ an expert commission to study the terminal problem and to devise plans which would best promote the future growth and development of the city. This recommendation was met by the answer that the city expected to rely upon its Harbor and Subway Commission for expert advice on this problem. When that body, however, indicated its inability to give this problem proper

## FOREWORD

consideration, the Committee decided to employ special expert service, and secured from the City Council an appropriation of \$10,000 for that purpose. Thereupon the Committee appointed one expert adviser, and one only, Mr. John F. Wallace, president of the engineering firm of Westinghouse, Church, Kerr & Co., New York City, thus rejecting the recommendation for a commission as proposed by the Directors and Committees of the City Club. This action of the Committee was not taken for the sake of economy, because the City Club offered to raise money, if necessary, to defray at least a part of the expense of a commission of experts. Mr. Wallace, having received his appointment from the Railway Terminals Committee, is now engaged in his investigation. He is expected to report by October next.

On August 22, 1913, a group of citizens—over forty in number—announced plans for raising a private fund of \$100,000, two-thirds of which had already been conditionally subscribed, for a thoroughgoing study of the terminal problem by an expert commission. The administration of this fund was placed in the hands of a Citizens' Terminal Plan Committee, consisting of Messrs. Alfred L. Baker, Julius Rosenwald, Alfred Cowles, David R. Forgan, Morton D. Hull, A. A. Sprague 2nd, John W. Alvord, Judge Charles S. Cutting and Mrs. Emmons Blaine.

It was announced that as a preliminary step to such a study, Mr. Bion J. Arnold would be engaged to examine all plans now pending, including the terminal proposals of the Pennsylvania and its associated companies and the report of Mr. Wallace when submitted. Mr. Arnold will then make a direct study of the entire situation and report on what, in his estimation, are the essentials of an efficient railway terminal plan for Chicago. How far Mr. Wallace's proposals meet the requirements of the situation will be clearly shown, and, finally, Mr. Arnold will be asked to submit an outline of the field to be covered by the proposed Citizens' Expert Commission.

The terminal problem, therefore, is now the subject of two independent studies by expert engineers: one, by Mr. John F. Wallace, for the city; the other, by Mr. Bion J. Arnold, for the Citizens' Terminal Plan Committee.

Chicago, September 15, 1913.

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# I. PLANS OF THE PROPOSED UNION STATION IN CHICAGO FOR THE PENNSYLVANIA RAIL- ROAD AND ASSOCIATED LINES

ADDRESSES BEFORE THE CITY CLUB OF CHICAGO, JUNE 3, 1913, BY MR. E. R. GRAHAM, OF D. H. BURNHAM & COMPANY, ARCHITECTS, AND MR. HALE HOLDEN, VICE-PRESIDENT OF THE CHICAGO, BURLINGTON AND QUINCY RAILROAD COMPANY

## ADDRESS OF MR. E. R. GRAHAM—



COME before you today at the request of your officers to present and explain the plans that have been prepared for the development of terminals for the use of the five roads now occupying the Union Station on the west side. This project, like all similar projects, is of the most direct interest to the public, and must therefore be proven to be in the general interest of the entire community.

The city is fortunate in possessing at the present time, in the form of a permanent record, a definite guide for the carrying out of all such projects. I refer to the Plan of Chicago, prepared by the Commercial Club, under the professional guidance of the late D. H. Burnham. In the preparation of the Plan of Chicago, Mr. Burnham assembled about him as counselors and co-workers, professional men of the highest standing, as had been his invariable practice in all undertakings throughout his life, and the result—the book entitled *The Plan of Chicago*—is a monument to all concerned in its preparation. Through the effective work of Mr. Charles Wacker it has reached more homes in the City of Chicago than perhaps any other book except the family Bible.

The Chicago  
Plan—  
A Guide for Civic  
Improvement

In undertaking the study of how increased passenger facilities might be improved in Chicago, the Union Station railroads considered many possible sites. In their final conclusions they decided upon the present site suitably enlarged and with the head-house moved to the block bounded by Jackson boulevard, Adams street, Canal street and Clinton street. The preparations for this work began previous to the making of the Plan of Chicago, but when the time came for choosing the site, the Plan of Chicago was in existence, and the railroad officials, in making their selection, felt that by holding to the present location, they were working fully in accord with the wishes of the people in locating the passenger station according to that Plan.

Choosing a Site

## THE RAILWAY TERMINAL PROBLEM OF CHICAGO

### Preliminary Investigations

The statement has appeared in the public prints that in undertaking this project, the railroads were going ahead without proper study of the conditions. It is not necessary to say to you men of affairs that capital is timid. The responsibility for investing large sums of money in permanent improvements is one which successful men of business assume with a full appreciation of the importance of the decisions which they make; and before making such decisions, involving the expenditure of millions of dollars, any successful business manager takes the precaution of a conscientious preliminary collection of facts followed by the most careful analysis, all with the aid of the best expert talent he is able to employ.

The railway officials responsible for the improvements now projected on the west side of Chicago have had ample time for preliminary investigation of this project and have devoted to it the most conscientious study. Acting through a period of several years and with an elaborate system of investigation, calling for the expenditure of thousands of dollars, they prepared, up to the year 1910, a collection of data on railway terminals such as probably had never before been brought together in the history of railroading. All the important terminals in the country and in Europe were investigated and charts were prepared showing all the data of interest in connection with these great improvements. This investigation covered all essential features of terminal operation, such as number of trains per hour, number of tickets sold, number of passengers of different class, etc., both under normal conditions and at rush hours, and even went so far as to fix the number of toilets. In connection with the freight terminals, the same method of study was followed and great quantities of statistics on this subject were collected.

### Passenger Site Conforms to Chicago Plan

The head-house of the proposed Union Passenger Station is to be located, as I said, between Canal street, Clinton street, Jackson boulevard and Adams street on the identical spot provided in the book of the Chicago Plan, the only difference being that the passenger tracks, instead of covering the entire width of the block and converting east and west streets into tunnels, as called for in the Chicago Plan, are left depressed below street level east of Canal street and the freight track approach for the Pennsylvania freight terminal stops at Van Buren street, thus improving upon the Chicago Plan scheme by leaving open to the sky all streets between Van Buren and Madison.

### Station Features

Interesting features of the plans are the two cab stands beneath Canal street and an entirely new street on railway property between Jackson and Adams, all connected up with ramps or inclined planes

## PLANS OF THE PENNSYLVANIA AND ASSOCIATED LINES



te 1.

### PERSPECTIVE VIEW OF THE PROPOSED PASSENGER STATION FOR THE UNION STATION COMPANY IN CHICAGO

This station is intended for the lines entering the present Union Station. The head-house is located on the block bounded by Canal street, Jackson boulevard, Clinton and Adams streets, the main entrance being on Canal street. Train sheds are to be placed below street level between Canal street and the river.

Interesting features are the two cab-stands below Canal street (not seen in the drawing) and a new street along the river entirely on railway property between Jackson boulevard and Adams street.

Plans are by D. H. Burnham & Co., architects.

for the rapid handling of commuters, the scheme being to separate the commuters from the through passengers and to separate ingoing from outgoing currents of travel. The train sheds are of the low type and will be insulated to avoid the effects of heat.

The proposed location of the new post-office just west of the station makes possible a great work room, occupying the entire area under the head-house concourse, for the mechanical handling of the enormous mail passing through this station, amounting to 65 per cent of the total.

New Post Office  
Location

The new passenger station will occupy the site of existing freight terminals, which are supposed to be the best in Chicago, compelling the sacrifice of these facilities on the part of the Pennsylvania. The Pennsylvania has chosen, instead, the site further west and south between Van Buren, Ewing, Jefferson and Desplaines streets where they have planned a most ingenious triple-deck terminal, the outgoing freight being placed below grade, the incoming freight

The Freight  
Terminal

## THE RAILWAY TERMINAL PROBLEM OF CHICAGO

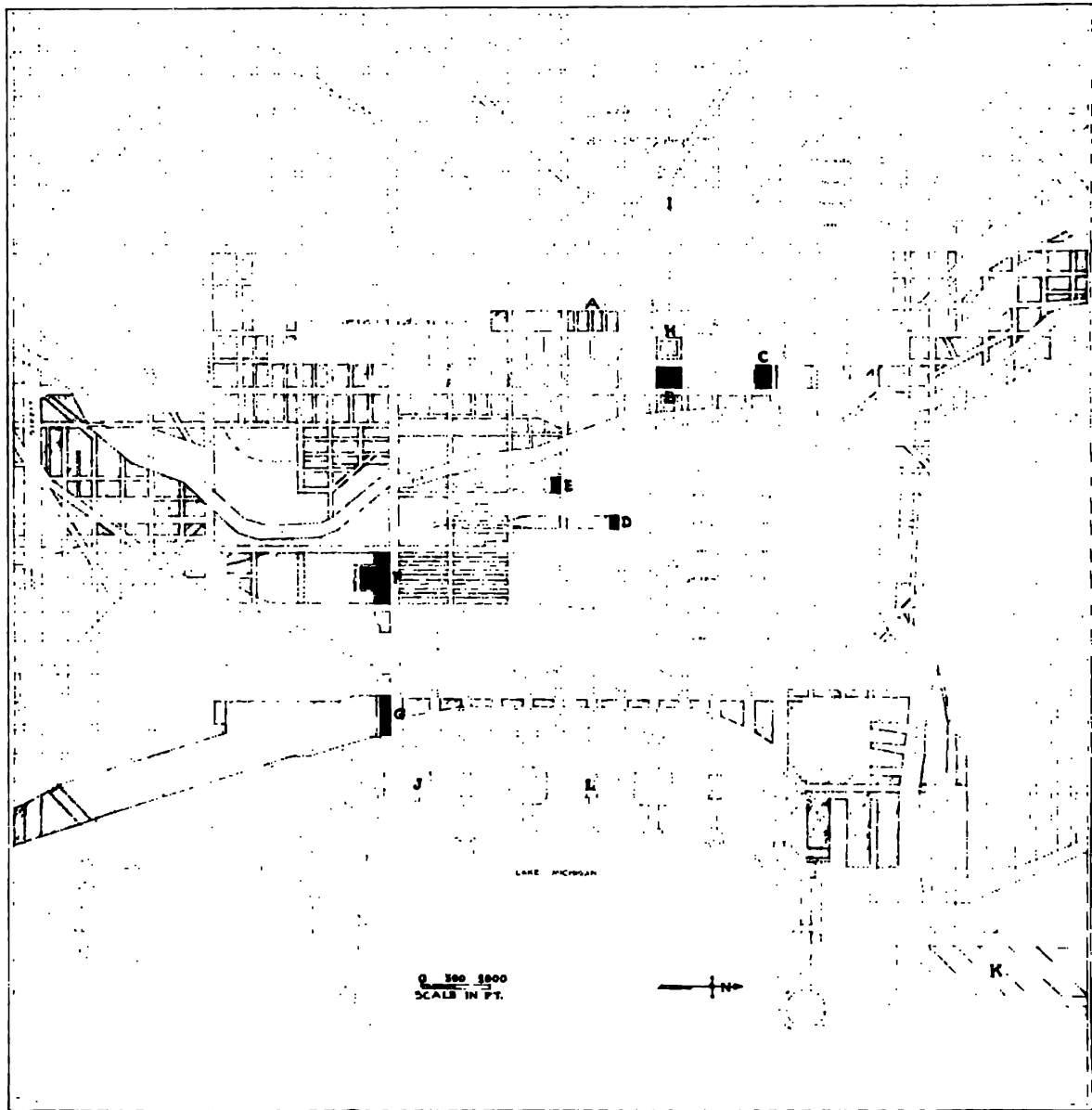



Plate 2.

### KEY:

- |   |   |
|---|---|
| <p> Railroad property. (Illinois Central property shown as under contract with the South Park Commission.)</p> <p>A. Proposed Pennsylvania Railroad freight terminal.</p> <p>B. Proposed Union Passenger Station.</p> <p>C. Northwestern Station (as at present).</p> <p>D. LaSalle Street Station (as at present).</p> <p>E. Grand Central Station (as at present).</p> | <p>F. "State Street" Station — Polk Street terminal moved from Polk to 12th Street.</p> <p>G. Illinois Central Station — Moved from Park Row to 12th Street.</p> <p>H. Proposed west side post-office.</p> <p>I. Proposed civic center.</p> <p>J. Proposed new site for Field Columbian Museum.</p> <p>K. Site of proposed new Lake Front Harbor.</p> <p>L. Grant Park.</p> |
|---|---|

### THE "PENNSYLVANIA PLAN" FOR THE CITY OF CHICAGO

Map of central district of Chicago showing locations of new passenger and freight terminals proposed by Union Station Company and Pennsylvania Railroad Company in relation to various other existing and proposed stations, and the proposed modifications of the city plan. New diagonal streets are shown connecting with the proposed civic center and with the downtown business district.

## PLANS OF THE PENNSYLVANIA AND ASSOCIATED LINES

above grade, with the teams on the street level operating entirely in five private streets, thus avoiding the congestion frequently caused in the neighborhood of freight terminals by inadequate platforms for loading and unloading of freight.

When a railway company builds a new freight terminal, it does so with only one object in mind; i. e., the successful handling of an increased tonnage for the mutual benefit of the railroad and the shippers. This depends, first, upon track capacity; second, upon transfer within the building by means of platforms, elevators, etc.; and, third, upon the approach to the terminal of team traffic through the streets.

It would clearly be ridiculous on the part of the railroad officials to provide a terminal with a greatly increased track capacity, if the surrounding streets were inadequate to bring such traffic to that terminal, or if the platform space were too small for the successful loading of the goods. Our study of street capacity for the successful handling of freight by teams in the neighborhood of the proposed new Pennsylvania Freight Terminal made clear the fact that the adjoining streets were insufficient. It was found that, in order to handle the work, five additional streets, running from end to end of the property, will be required, and these are called for on the plans. By means of this device, the adjoining streets are left quite clear from curb to curb for moving traffic, thereby making these streets much more effective than similar streets where teams back up against the sidewalk and cut the street to one-half or one-third its normal width.

Additional Street  
Capacity

The most interesting and significant feature of the entire project above outlined lies in the fact that the railroads have perfected their plans, bought their property, and are prepared to expend many millions of dollars on this project which will be a great public benefit. If the people of Chicago approve the scheme, it can stand before them as a reality within two years' time.

The Plan can be  
Made a Reality in  
Two Years

### ADDRESS OF MR. HALE HOLDEN—

The Burlington Company is an old citizen of Chicago and has, I think, established in the minds of Chicago citizens a reputation as an efficient public servant. That is the fundamental idea upon which we are seeking a new and enlarged terminal lay-out here in Chicago. We are trying, gentlemen—and that is substantially the whole story—better to serve the public convenience.

The essential value of interior terminals is that they abridge distance. We and other lines doing a suburban business deposit every day and take up every night a very large number of suburban

Suburban  
Service

## THE RAILWAY TERMINAL PROBLEM OF CHICAGO

passengers. At the present time the Burlington road is operating 94 passenger trains a day in and out of the Union Station, of which 62 or 66 per cent are suburban trains. In February, 1913, the total number of passengers using the Burlington line in Chicago was 381,480 and of those 329,566 or 86.3 per cent were suburban passengers. Is it not obvious that it is to the interest of every one of the suburban passengers to be deposited as close to the central business district as possible, so that he may reach his place of business without intervening car or cab fare and without delay?

Many years ago the Burlington had its passenger terminal on the lake front and reached this terminal from 16th Street. But it felt—and time, it seems to me, has demonstrated the wisdom of this—that it should have for the convenience of its patrons a location closer to town. So we sought the location where we now are and we have practically a perpetual contract with the Pennsylvania Company for that location.

Freight  
Terminal Changes

I presume you will admit that the present passenger terminal occupied by these roads is wholly inadequate. It has been a matter of study for six years or more to work out a plan whereby a suitable terminal in keeping with the dignity of this city might be provided. The first thing which confronted those working upon this plan was that more room was required, and that led to the conclusion that if the passenger facilities were to be increased the Pennsylvania Company must surrender its present favorably located freight terminal. The Pennsylvania has expressed a willingness to do that and ought, I think, to have public support in its effort to secure a new location as convenient to the public as that which it is surrendering. It is in that light that the request of the Pennsylvania Company for its freight location on Jefferson street should be viewed. It is not in the position of a company coming in now for the first time and asking to be admitted into the heart of the city.

A very able railroad man said some years ago that railroad terminals are “the hands and feet of a railroad.” It is obvious that the size and strength of these terminals measure the efficiency of the work they are calculated to perform. Are they, on the other hand, obstructions to the growth of a city and hostile to its general welfare? The trend of discussion from time to time would seem to indicate that they are. We have not thought so. Otherwise we would not have invested millions in them.

Location of  
Freight Terminals  
Affects Cost of all  
Commodities

What are these interior terminals for? Most of the through freight, destined for interchange, passes wholly outside of the interior district and is handled by the various outer belt lines. It is through

## PLANS OF THE PENNSYLVANIA AND ASSOCIATED LINES

these terminals, gentlemen, that your food and food-stuffs—milk, ice, perishable fruits, vegetables, etc.—your fuel, building materials and the thousand and one other articles of use and necessity are handled. The cost of living in Chicago is governed in a very great degree by the cost of transportation of these articles of prime necessity. The Burlington Road, for instance, brings a ton of coal from southern Illinois, 400 miles distance, for \$1.05, but my understanding is that the average cost of delivery in the business district by wagon, from team track to consumer, is over 50 cents a ton, substantially half, we will say, of what the Burlington railroad charges for bringing that ton 400 miles. Illustrations like this suggest immediately that the cost of living is much involved in the cost of getting these necessities of life from the freight car to the consumer.

If these freight terminals are pushed out another mile from the business district there can be no other result than that public inconvenience will ensue and there will be no increased cost of every ton of freight consumed in the business district. Furthermore, shipping costs are intimately involved in your ability to compete with other trade centers. The Chicago merchant, in our judgment, can ill afford to have these convenient terminals moved away, so that the team that today hauls three or four loads of freight from the freight house will tomorrow haul perhaps only two.

Transfer Costs  
Increased by  
Distant Terminal

The railroads have not located themselves on these highly expensive parcels of land as a matter of choice solely. There is no single railroad service that involves more expense, considering the carrying charges on trackage, taxes, and public requirements for improvements—such as the separation of grades—than the interior terminals. If only the selfish interests of the railroads were consulted, it is perfectly obvious that they would prefer to leave their freight on the outskirts. But the order of efficient business has always been and always will be for the railroad to perform as much of the transportation service as it can and bring the freight in as near as possible to the point where the consumer wants it. By the measure in which the railroad is permitted to do that does it decrease the auxiliary cost of handling the goods from the car to the warehouse or the point of consumption. Now, it strikes you, possibly, when I say that we have a mile of expensive property devoted to freight business along the west side of the river, that this is a very large area; but even with that area our freight terminals today are wholly inadequate. We have plans for the improvement of this large area. They involve the erection of new freight houses of suitable type of

Terminal Property  
Costly



## THE RAILWAY TERMINAL PROBLEM OF CHICAGO

architecture. The freight warehouse is coming rapidly, which utilizes the air space above the tracks.

Plans for  
Burlington  
Freight Terminal

For very many years the Burlington has owned freight terminals south of Harrison street, upon which its main freight houses and team tracks are located. As its business has grown it has expanded these terminals better to serve the downtown business district of Chicago. Within a year it has purchased the Crane property on Canal street from 12th to 16th, so it has today, for the future expansion of its freight service, a space of about a mile in length between Harrison and 16th streets. None of our plans, gentlemen, involve the closing of any streets now in use or the encroachment upon any street, nor, as we understand it, interference with any plan for the betterment of civic conditions in Chicago.

Twelfth Street  
Passenger Scheme  
Not Practicable

It is not my purpose to enter into a discussion of any other plans that have been suggested, but I want to mention here the plan proposed by the executive officers of the Chicago Plan Commission. That plan suggests that for the west side roads there should be a passenger terminal at 12th Street on the west side of the river, after a change in the river channel at that point is accomplished, and that there shall be an extension northward of tracks, whereby the suburban passengers using the Burlington and Pennsylvania may still be delivered at Adams street at the present location. Our engineers tell us that with the south bound through traffic coming down to the proposed terminal at 12th Street and the north bound suburban traffic going as far north as Adams street, not less than six tracks will be required for the free movement of that business in both directions. The public convenience, we believe, will never be served by leaving the passengers—coming in over our lines, at least—at a point as far south as 12th Street.

Would Eliminate  
Burlington  
Freight Terminal

To accomplish the passenger terminal plan of the officers of the Plan Commission, however, involves the elimination entirely of the Burlington freight terminal, and no suggestion is made as to where the Burlington will relocate that terminal. And when I tell you that we handle out of our interior freight houses nearly 1,400 tons of package merchandise a day, you will realize that the business of every merchant and every consumer in this district is involved. I leave it with you, gentlemen, whether it is wise to consider the transfer of that freight business, in which the cost of hauling is so intimately concerned, a mile beyond where it is now handled.

Now, I am not going to assert that engineers and architects cannot be found who, with unlimited resources of money and an unlimited right to disregard public convenience—including the incon-

## PLANS OF THE PENNSYLVANIA AND ASSOCIATED LINES

venience involved in the long period of readjustment whereby all of these changes would be accomplished—cannot produce a joint terminal plan at any point in this city, and that all the railroads might not go to that point. But is that the problem with which commercial Chicago is confronted?

The railroads have done their share in the upbuilding of Chicago and in serving your commercial interests. We believe that the city's best interests are served by taking upon our shoulders as much of the cost of making these interior transfers as we can—and that can only be done by permitting these interior terminals to remain. They are your efficient servants. They are susceptible of improvement, architecturally and in respect to efficiency, and no plan that we have involves any obstruction to the use of any other kind of motive power which may be adopted in the future.



## II. PROPOSAL OF THE CHICAGO PLAN COMMISSION FOR THE RE-ORGANIZATION OF CHICAGO'S RAILWAY TERMINALS

ADDRESSES BEFORE THE CITY CLUB OF CHICAGO, JUNE 4, 1913, BY MR. WALTER D. MOODY, MANAGING DIRECTOR OF THE CHICAGO PLAN COMMISSION, AND MR. CHARLES H. WACKER, PRESIDENT OF THE CHICAGO PLAN COMMISSION

### ADDRESS OF MR. WALTER D. MOODY—



PEAKING today on behalf of the officers of the Chicago Plan Commission, I would say that the greatest problem that has ever confronted the City of Chicago is the terminal question now before the City Council.

Possibility  
of Street  
Improvement  
Should be  
Safeguarded

We insist that this is no time to grant special privileges to any railroad or any group of railroads. Especially should no ordinance rights be granted which do not conserve the possibilities of improving and extending our downtown street system. Practically two million people have been added to the population of Chicago since there has been any adequate extension of the streets in the downtown business district. In the three square miles bounded by 12th Street, Halsted street, Chicago avenue and Michigan avenue, there are thirty-nine east and west streets: only seventeen of these are through streets. There are twenty-four north and south streets in this district between Halsted street and the water's edge: only four run through from Chicago avenue to 12th Street. The improvement of streets in the downtown district should be a primary consideration in terminal planning in Chicago.

Reclaiming  
Railroad  
Holdings  
Downtown

Furthermore, within the next few years, every available inch of this area of three square miles will be needed for business uses. Thirty-two per cent of it is now railroad property. The city should approve no plan for the rearrangement of Chicago's terminals which does not provide for the reclamation for business purposes of a large part of this railroad area. The people who are favoring the location of the Union Station where the railroads propose to put it, as a means of keeping property values up in the loop district, will pay the penalty later on unless they allow for some reasonable expansion of our congested central district.

Extensive  
Terminal  
Improvements  
Soon to be Made

Besides the roads entering the Union Station, at least three other groups of railroads are contemplating a rehabilitation of their Chicago terminals within five or ten years at the outside. With the possibility of \$125,000,000 being expended here for railway terminals so soon, we insist that until all the railroads of Chicago are brought

## PROPOSAL OF THE CHICAGO PLAN COMMISSION

in a spirit of amity to agree upon a plan which will serve not only their own interests but also the larger interests of the city itself, no special privileges should be granted by the city to any railroad or group of railroads. If such privileges are granted to one group of railroads they must also be granted to the others. If in this reorganization of railroad properties the opportunities for street expansion and reclamation of railroad land for business purposes are neglected, we shall unquestionably have to pay the penalty of our lack of foresight.

The officers of the Chicago Plan Commission have, I believe, attended every hearing before the Council Committee on Railway Terminals relating to the proposed grant of ordinance rights to the Pennsylvania Railroad and other companies using the Union Station. They have failed to discover any arguments whatsoever—not wholly selfish—favoring the location of the west side passenger station proposed by those railroads. "Pennsylvania Plans"

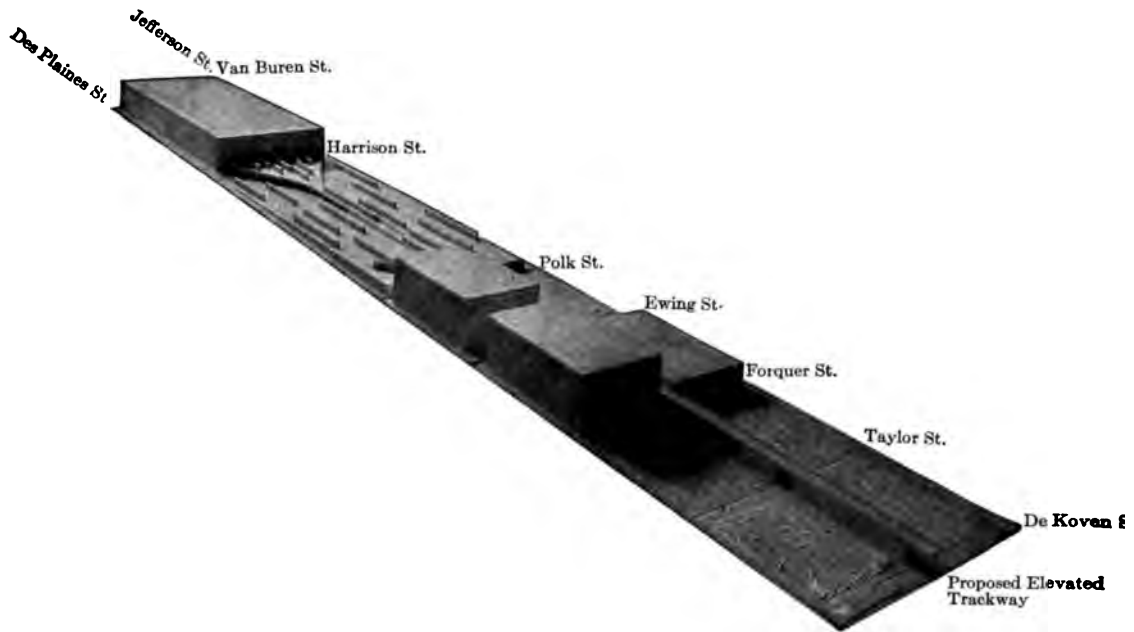
Mr. Graham yesterday showed you the magnificent terminal which the railroads offer us, that beautiful Roman structure with classic lines. Such a station in view of the disgraceful conditions in the present west side station, we have a perfect right to expect, and a perfect right to demand.

When the Union Station officials appeared before the City Council Committee on Railway Terminals, they stated, in answer to direct questions by their attorney, that their present Union Passenger Station is a disgrace to Chicago, a menace to life and limb, and wholly inadequate for present needs, facts sadly evident to the people of Chicago for the past quarter of a century. The next day the newspapers published an ultimatum by those railroad officials in which they said that if they could not carry out their proposed plans they would carry out none, although they had admitted the disgraceful conditions which exist in their present station. Gentlemen, as one citizen of Chicago, I am not prepared to have persons come here from Pittsburgh or anywhere else and tell me to jump through their hoop and then to hurry up and get through backwards, and I don't think the rest of the citizens of Chicago are in that frame of mind either. An Ultimatum From the Railroads

In answer to that declaration, it needs only to be pointed out that a railway company, like any other commercial enterprise, must increase its facilities as its business grows. When Marshall Field & Company found they could not do their business in a seven-story building covering a quarter of a block, they went into a twelve-story building covering half a block and as their needs have in-

## THE RAILWAY TERMINAL PROBLEM OF CHICAGO

creased they have further expanded their facilities. The railroads of Chicago are in a similar position. They have got to expand. The facilities of the railroads entering the Union Station are inadequate even now, as the railroads themselves have admitted. If the railroads are not granted the ordinance rights which they now request, they may bluff along for a year or two, but sooner or later they must—as a simple business proposition—act with the other railroads in working out a satisfactory plan for all of Chicago's rail-



*Plate 3.*

### THE PROPOSED PENNSYLVANIA FREIGHT TERMINAL IN CHICAGO

#### PHOTOGRAPH OF A CLAY MODEL MADE FOR THE CHICAGO PLAN COMMISSION

The main depot for incoming and outgoing freight will be located on the city block bounded by Jefferson, Desplaines, Van Buren and Harrison streets. On the block due south between Harrison and Polk streets will be incline team tracks, on a solid fill, running from street level at Harrison street to an elevation of 22 feet over Polk street.

The elevated structure for the freight tracks will be continuous south from DeKoven street to Maxwell street, thence south-east to the main line.

roads. Other railroads are willing to co-operate and the City of Chicago has every right to expect harmonious action by all. The power to control the situation is absolutely in the hands of the City Council and the city should not allow itself to be bluffed into hasty action.

## PROPOSAL OF THE CHICAGO PLAN COMMISSION

The Union Station railroads have held before the eyes of the people of the west side a vision of the commercial prosperity which will be theirs when the plans which they propose have been carried out. I cannot see how a railroad passenger terminal can benefit

Union Station of  
No Advantage to  
West Side

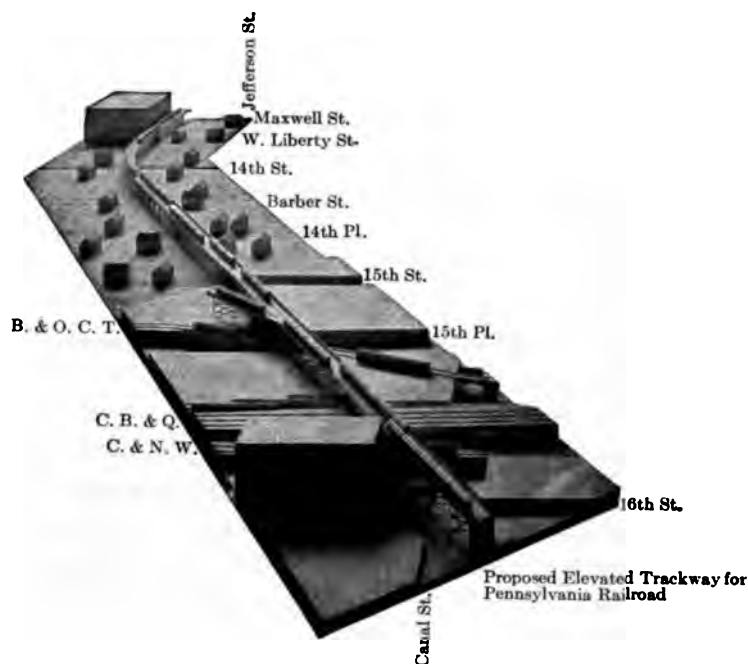


Plate 4.

### A PART OF THE APPROACH TO THE PROPOSED PENNSYLVANIA FREIGHT TERMINAL IN CHICAGO

#### PHOTOGRAPH OF A CLAY MODEL MADE FOR THE CHICAGO PLAN COMMISSION

The plans of the Pennsylvania Railroad call for an elevated structure carrying freight trackways, which shall branch off from the main line near 18th Street and follow a diagonal course running due north-west to about Maxwell street. Near Maxwell street the elevated structure broadens and changes its direction to due north, paralleling Jefferson street.

At 16th Street the elevated structure will be 30 feet above street level.

anybody, to any extent, but people who want to take or leave trains and the people who own it. The businesses which succeed close to railroad terminals are saloons, drug stores, news stands, fruit stands and other minor businesses. The railroads repel solid and producing business.

## THE RAILWAY TERMINAL PROBLEM OF CHICAGO

Freight Terminal  
Menace

Not only is there no great advantage to the west side in having the passenger terminal where the roads propose to place it, but the location of the freight terminal proposed by the Pennsylvania road is an actual menace to that section of the city—as indeed it is to the city as a whole.

Pennsylvania  
Freight Plans

Mr. Graham in his address before the City Club yesterday barely alluded to the freight question. The railroads have talked about their freight plans only under pressure and very reluctantly. When the first public exposition of the plans of the Pennsylvania Railroad was made last summer before the Executive Committee of the Chicago Association of Commerce absolutely no reference was made to the freight question. When the plans were published in the newspapers last August, the same was true. Last February, when our Executive Committee met in full session with the Union Station officials, it was only upon insistent and direct interrogatories by Chairman Wacker of our commission that any information on freight plans was had, and then statements were made which do not correspond with the plans which are now proposed. The railroads were smoked out only when they discovered that the officers of the Chicago Plan Commission were going to take up the question. Then they went before the Railway Terminals Committee to explain and asked for half an hour of the time set aside for the Chicago Plan Commission.

The freight question, gentlemen, is a very important element of the problem. We maintain strongly that it is absolutely impossible to separate it from the passenger phase of the question. It is obvious that if the Pennsylvania Company gives up its present freight facilities for the new passenger station it must establish them elsewhere. This it proposes to do, in this year, 1913, by running an elevated structure between Jefferson street and Desplaines street down into the heart of the west side as far as Van Buren street. Mr. Graham did not do so yesterday, but I shall present all of the essentials of that plan today in their negative characteristics.

The elevated freight structure which they propose to erect in the heart of the west side crosses 16th Street on a two-track right-of-way thirty-nine feet above street level, almost up to the top story of an ordinary five-story building. It crosses 12th Street at an elevation of about twenty-four feet above street level. The architects employed by the railroad have shown us a very beautiful arch on which they propose to carry tracks across 12th Street—a sort of pocket edition of the *Arc de Triomphe*. No beautiful arches have been proposed for other street crossings.

# PROPOSAL OF THE CHICAGO PLAN COMMISSION

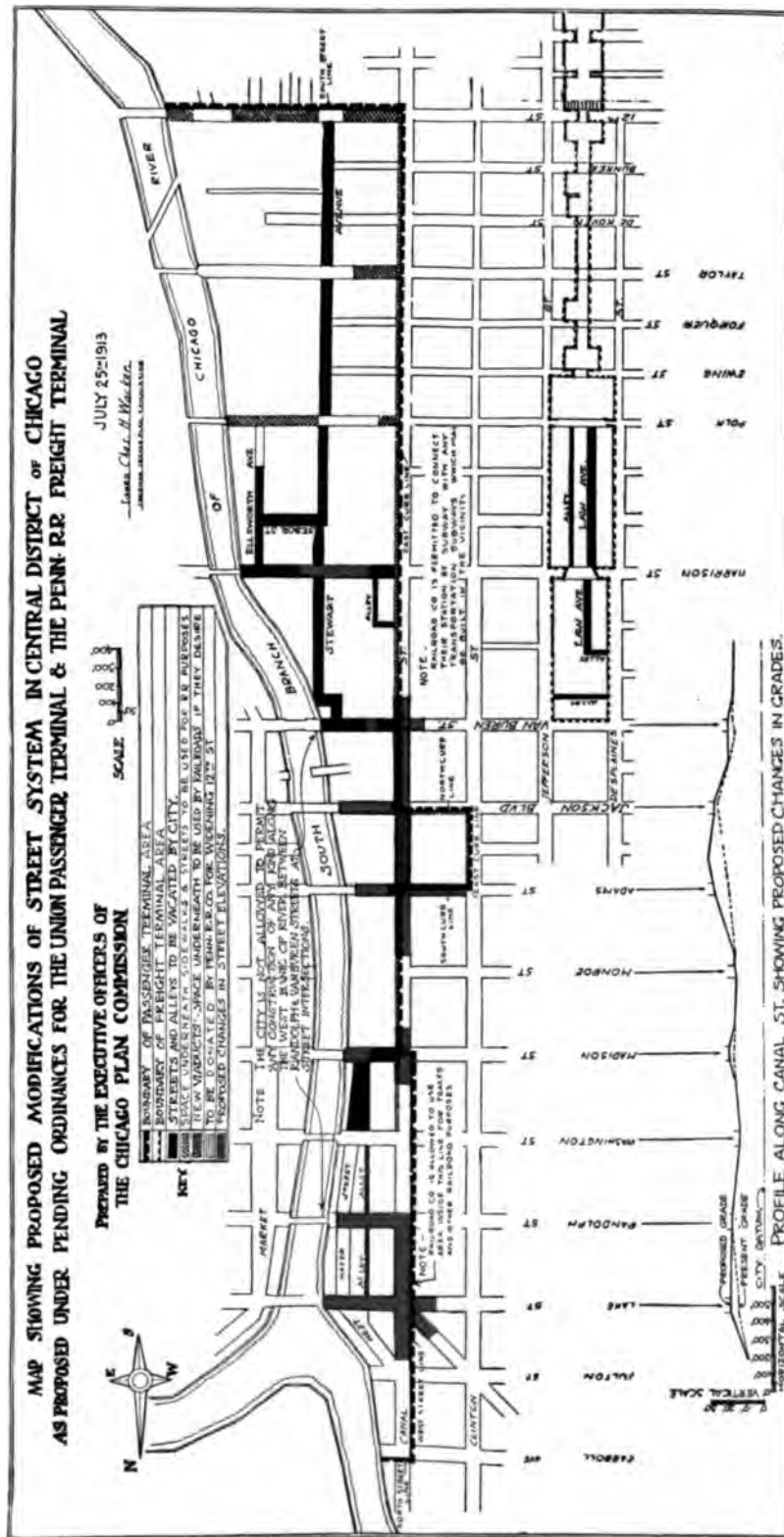


Plate 5.

**GRAPHIC REPRODUCTION OF THE UNION STATION ORDINANCE NOW PENDING IN THE CITY COUNCIL**

An interesting feature is the right granted to the Pennsylvania and associated railways to use Canal street, if they so desire, for tracks, etc., from Madison street to Carroll avenue.



## THE RAILWAY TERMINAL PROBLEM OF CHICAGO

**Blocking Off  
the West Side** Polk and Harrison streets will be crossed by the proposed freight structure at an elevation of about twenty-two feet above street level and, between Jefferson and Desplaines streets, will be almost entirely covered with railway tracks. Harrison street at this point will be crossed by a freight yard, squarely in the path of the only possible great axis into the civic center proposed in the Chicago Plan.

Between Harrison and Van Buren streets the railroads intend to place a great freight-house. Between Polk and Harrison there will be a twelve-track train-yard on a solid fill sloping from an elevation of twenty-two feet at Polk street to street grade at Harrison. Teams entering the freight-house and train-yard will clog Van Buren street, Harrison street and Polk street from dawn to dark.

If the Pennsylvania freight terminal is built as contemplated there will be two city blocks intervening between the elevated freight terminal and the railroad property east of Canal street. The value of the property thus shut in between the two terminals will be tremendously depreciated and the railroads will be able ultimately to buy it for a song. Then they will build their tracks over it solidly, widening the wall of railroad property between the west side and the business district. A two-track system such as that proposed by the Pennsylvania Railroad down to Van Buren street could not possibly serve the Pennsylvania's freight needs for any length of time. Why a two hundred foot right of way across the west side streets, if a two-track system only is intended?

**A Chinese Wall** We are opposed to the building of a Chinese wall of this sort through Chicago's west side. The elevated structure of the Northwestern Railroad at Randolph street and at Washington street shows how serious a barrier such a structure may be. If the Pennsylvania Railroad is permitted to build its elevated freight structure as planned, there will be left just five through streets from the center of the city to the west side. I cannot conceive that the City of Chicago would be willing to countenance such a proposition.

**Alternative  
Propositions** The Pennsylvania Railroad maintains that the only way to bring its freight tracks into the city is on an overhead structure such as that which I have described. Our engineers and our architect, Mr. Bennett—who collaborated with Mr. Burnham in working out the Plan of Chicago—have two possible alternative plans to suggest, as follows:

*First*, To run in an open cut from 31st Street to 24th Street, thence in a tunnel to 14th Place, thence in open cut to Harrison street.

# PROPOSAL OF THE CHICAGO PLAN COMMISSION

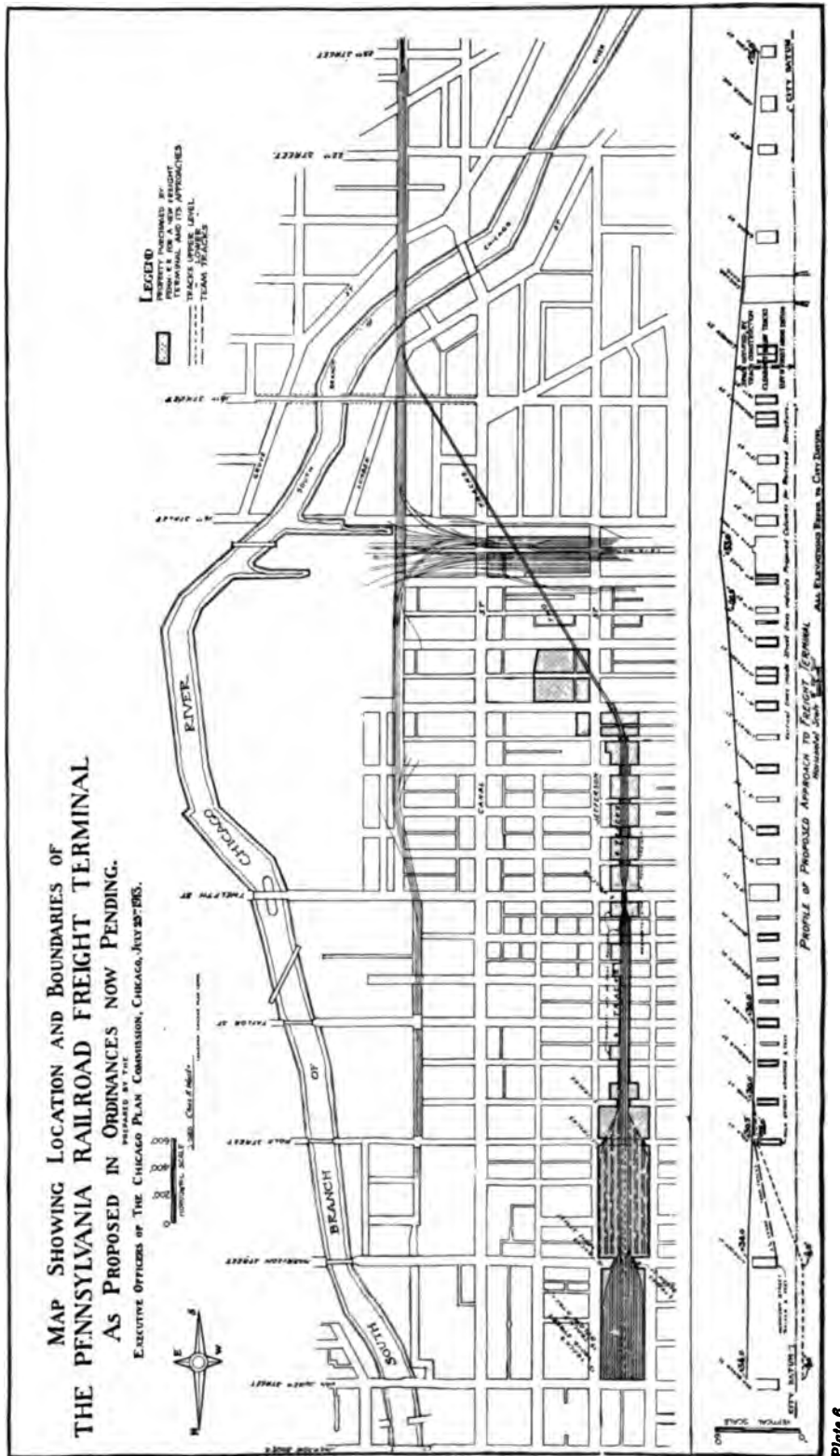


Plate 6.

The plans for the proposed freight terminal of the Pennsylvania Railroad contemplate an elevated structure on the west side between Jefferson and Desplaines streets running south from Van Buren and connecting with the main right-of-way over a two-track structure extending diagonally from 14th Street to a point south of 18th. North from 14th to Ewing streets there is a four-track right-of-way, and north from Ewing to Van Buren streets are the team tracks and freight yard. Outgoing freight would be received in a fifteen-track elevated yard between Harrison and Van Buren streets and handled by gravity to teams at street level. Outgoing freight also would be handled by gravity — from the teams at street level to a fifteen-track subway freight yard at the same point. Between Harrison and Polk streets is a twelve-track train yard on a solid fill sloping from an elevation of 92 feet at Polk street to street grade at Harrison street.

A profile of this freight structure, showing elevations with reference to city datum and clearance of tracks above streets, is shown at the bottom of the illustration.

## THE RAILWAY TERMINAL PROBLEM OF CHICAGO

*Second*, To leave the main line at the north end of the Pennsylvania Railroad bridge over the Chicago river, turn west, run down and under 16th Street and the Burlington, Northwestern and Baltimore and Ohio tracks, then in an open cut between Desplaines and Jefferson streets from 15th Place to the proposed terminal, thus permitting Congress and Harrison streets and other east and west arteries to cross the approach tracks at their present levels, keeping the tracks underneath 12th Street, and permitting the widening of these streets.

Plan of Chicago  
Should be  
Conserved

A freight scheme of this sort may cost more than the Pennsylvania's overhead plan, but when that company has been spending \$130,000,000 in the City of New York, and is spending other large sums of money in Pittsburgh and Baltimore and Philadelphia and elsewhere in the East, Chicago surely has a right to demand that the terminal improvements it requires be made.

The City of Chicago has also the right to demand of its railroad companies that no scheme of terminal reorganization shall be adopted which shall be a menace to the carrying out of the Plan of Chicago.

Chicago Plan  
Not Official

Mr. Graham has stated repeatedly that the plans of the Pennsylvania Railroad conform to the Plan of Chicago, the only official plan, he says, before the city. There is no *official* Plan of Chicago. The Plan of Chicago, created for the Commercial Club, was adopted by that organization simply as a suggestion. The City Council appointed the Chicago Plan Commission to study and develop it. It is not fixed and final.

In every one of the three instances in which the Plan Commission has acted in reference to it, it has been changed to a greater or lesser degree. We found the people did not want 12th Street a boulevard, so we omitted the boulevard feature and decreased the proposed width of the street. In the plans for the boulevard link, instead of widening Michigan avenue, north of Randolph, east to Beaubien court, as originally provided in the plan, we propose simply to widen the avenue to its existing width south of Randolph. The lake front plan has also been changed in some particulars. The Chicago Plan Commission has a right to change the railway terminal proposals of the Plan of Chicago if it is found to be in the general interest to do so, and if it can be done without materially affecting the main purpose of the plan, which should be pursued.

I wish, however, to refute the statement made here yesterday by Mr. Graham that the Pennsylvania plan conforms to the original Plan of Chicago. The Pennsylvania's freight scheme would prevent absolutely the widening and extension of Congress street and

## PROPOSAL OF THE CHICAGO PLAN COMMISSION

the widening of Harrison street, as proposed under the Chicago Plan. These are the only two streets between the business center and the west side that are capable of being widened or extended, other streets being too intensively developed. Furthermore, the proposed location of the Pennsylvania freight terminal will absolutely prevent the placing of the civic center at Halsted and Congress streets as proposed in the Chicago Plan. The Pennsylvania Railroad, to suit its own selfish purposes, proposes to move the civic center two blocks to the north. They propose then to widen Adams street and Jackson boulevard, on the west side, thus providing a main axis from the river west to their proposed civic center. I know of nothing more absurd than to widen streets west of the river which do not need to be widened and to claim that this will relieve the congestion in the center of the city. On the map which Mr. Graham exhibited here yesterday showing the civic center moved north to Jackson boulevard, were the words "Approved by the Chicago Association of Commerce." The Chicago Association of Commerce has approved nothing in regard to that plan. They simply adopted a resolution with regard to the post-office site proposed by the Pennsylvania Railroad. I was in the meeting and I will stake my reputation on that statement. Nevertheless, this plan has been exhibited all over Chicago as having been "Approved by the Chicago Association of Commerce." I maintain that this is not a proper procedure.

"Pennsylvania Plan" Blocks Street Improvement and Location of Civic Center

The carrying out of the Union Station and Pennsylvania freight terminal plans would mean a serious loss to the city of revenue from the property involved. The Union Depot officials say they intend to expend about \$30,000,000 in rehabilitating their properties. The best architects, informed, unbiased and unprejudiced, cannot possibly see how they will spend more than \$4,000,000 to \$5,000,000 at the outside in terminals and terminal buildings. It must follow then that at least \$25,000,000 will go into real estate holdings for rights of way and other purposes. To take out of the west side \$25,000,000 of property now assessed upon a commercial basis will reduce the tax income from that property \$375,000 a year, because railroad property is taxed according to the flat rate of so much per mile of track within the city. That \$375,000 annual tax loss must be sustained by west side property holders.

Would Sacrifice City Revenue

Now for the other side of the ledger. Suppose we could reclaim for commercial uses a large amount of property used by railroads in the central district, which we can do in the course of a few years, under the plan which I am about to describe, proposed by the

## THE RAILWAY TERMINAL PROBLEM OF CHICAGO

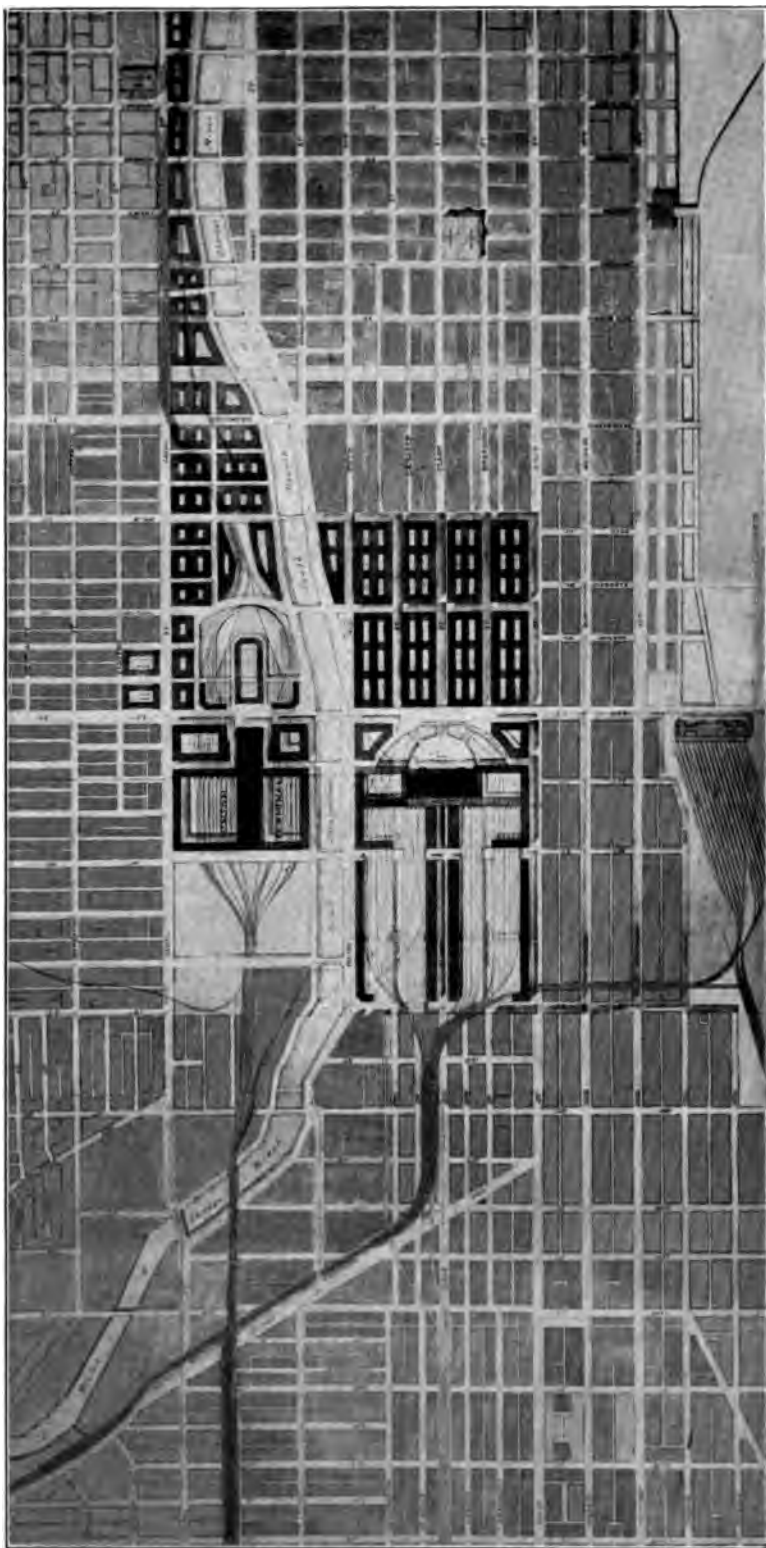


Plate 7.

### RAILWAY PASSENGER AND FREIGHT TERMINALS FOR CENTRAL DISTRICT OF CHICAGO

PROPOSED BY THE OFFICERS AND STAFF OF THE CHICAGO PLAN COMMISSION

This plan proposes to straighten the Chicago river from 12th to 16th Streets, to establish freight and warehouse facilities with water connections on both sides of the river north of 12th Street, and to provide — in addition to the present Northwestern Station — three new passenger terminals along the south line of 12th Street, viz:

1. Illinois Central Station east of Indiana avenue.
2. Station east of the new river channel and west of State street for the lines now using the "Polk street" and "La Salle street" depots.
3. Union passenger station west of the new river channel and east of Canal street for the lines now using the "Union Passenger" and the "Harrison street" stations.

Loop operation of trains is provided for in the plans for the two stations last mentioned (Nos. 2 and 3). The others will be operated as stub-end terminals. Freight and warehouse districts, with waterway connections, are proposed for both sides of the river north of 12th Street.

## PROPOSAL OF THE CHICAGO PLAN COMMISSION

officers and staff of the Chicago Plan Commission. If that property, now assessed upon the low mileage basis which I have mentioned, is all devoted to intensive business use and taxed on that basis the gain in public revenue will be beyond present computation.

Let us take up now the passenger and freight terminal plans of the executive officers and staff of the Chicago Plan Commission. Our first step in carrying out our plans would be to straighten the Chicago river from 12th to 16th Street, a distance of half a mile. It would not be necessary to resort to condemnation proceedings to bring this about, as the territory involved is all railroad property and the carrying out of the improvement needs only harmonious action among the railroads. They could make this improvement for \$3,000,000, at the same time reclaiming property worth several times that amount.

Plan of Officers  
of Chicago Plan  
Commission

Our passenger terminal plan provides for four unit passenger stations. Three of these, all new stations, will be at 12th Street, the fourth being the present Northwestern Station. Railway passenger terminals on 12th Street will serve a larger part of the people of Chicago than terminals placed between Adams and Jackson, because they are nearer the center of population, which is at 22nd and Fiske streets.

A Four-Unit  
Passenger System

It has been intimated that we have some ulterior design in trying to get the railroads moved to 12th Street. I want to deny that statement absolutely. In fact, we are not moving any railroads to 12th Street: the railroads are already there. We simply want to bring good order into the 12th Street railroad district and to develop Chicago's central and outlying districts as both ought to be developed from a common sense, business standpoint.

Besides the proposed new Illinois Central Station on 12th Street east of Indiana avenue, our plans call for two new passenger depots on 12th Street; one, for the roads entering the Union Station and the Grand Central Station, to be located west of the river; the other, for the roads entering the La Salle and Polk Street Stations, to be located east of the river—both to be operated as loop stations. Stub-end stations, being expensive, wasteful of time and difficult of operation, are being built to-day only where through stations are impossible.

Loop Stations on  
12th Street

By locating the new terminals fronting north on 12th Street, between State and Canal, we would provide nearly three-quarters of a mile of wide street space to relieve the congestion that might occur at any one central point. Transportation facilities can be provided easily which will handle 25,000 people an hour going in one direc-

Street  
Improvements  
Made Possible

## THE RAILWAY TERMINAL PROBLEM OF CHICAGO



Plate 8.

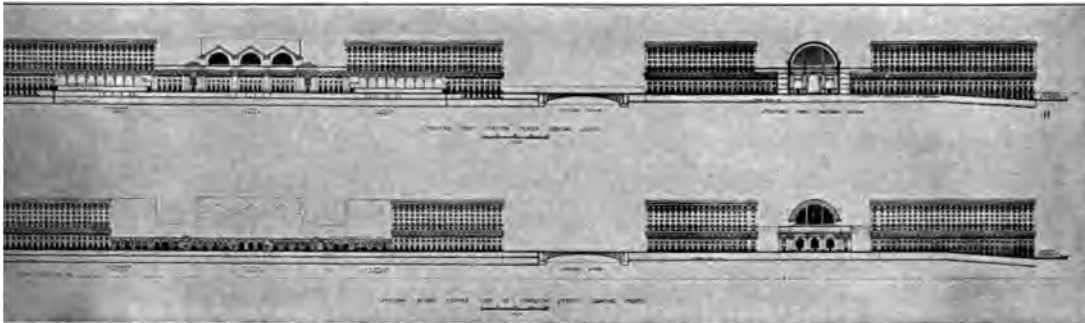
### PERSPECTIVE VIEW OF THE UNION PASSENGER STATION—ONE OF THE THREE NEW TERMINALS PROPOSED BY OFFICERS AND STAFF OF THE CHICAGO PLAN COMMISSION

This proposed station has a frontage of 700 feet on the south side of 12th Street and west of the proposed new channel of the Chicago river. The concourse is south of 12th Street and at street level, but trains are to be operated on a loop to the north of 12th Street and below street level. By means of this loop incoming and outgoing passengers will be separated and it is claimed that large increase in station capacity will be secured. Space above and between the tracks not used for station purposes is intended for building development.

tion, or double that for two directions, as against eight thousand per hour one way, which is the capacity of the facilities which can be provided at the Adams street station.

By the economies which we can effect, if our plan is carried into operation, we can extend, through present railroad property, a large number of new streets, thus opening new channels of communication between the business district and the south and west sides. Dearborn street can be opened up to the south side and Fifth avenue, Market street and Franklin street will converge upon a great river road, leading on for an indefinite distance to the south. Under our plan we carry Polk and Taylor streets across the river as 80-foot instead of 40-foot streets as at present. We would create

## PROPOSAL OF THE CHICAGO PLAN COMMISSION



### ARCHITECTURAL DEVELOPMENT OF THE TWELFTH STREET TERMINALS PROPOSED BY THE CHICAGO PLAN COMMISSION

Upper drawing: Section through station plaza looking south.

Lower drawing: Section along center line of 12th Street looking south.

a new street south of the head-house to relieve any congestion on 12th Street and carry 14th and 16th Streets through to the west side. Canal street from Lake street south to Archer avenue we would elevate to the level of the bridge approaches, thirteen feet above the present street level. We would also connect the north end of Canal street with Wells street by a bridge across the Chicago river, an improvement of tremendous importance, connecting as it would the west with the north side.

If the Union Station is placed at 12th Street, the new post office could be located across from that station on the north-west corner of 12th Street and Canal street, close to the passenger terminal handling the largest amount of mail and on a site far cheaper than that proposed by the railroads at Adams, Jackson, Clinton and Desplaines streets.

Proposed New  
Post Office Site

It has been charged against our plan that we would disrupt suburban railway traffic by moving it back to 12th Street. We would not move that traffic to 12th street. We would bring the suburban traffic entering the Union Station to Madison street, north of where it lands to-day. The suburban traffic entering the La Salle Street Station would continue to come to that point. We would not disturb the Illinois Central traffic in any particular.

Suburban Traffic  
Not Disturbed

The 12th Street terminal plan would lend itself to any comprehensive subway system for the downtown section. It would conform easily to expansion of the elevated railway and surface car service.

Connections  
with Local  
Transportation  
Facilities

So much for our passenger station plan. Let us next consider the freight plans proposed by the officers of our Commission. It was stated here yesterday by Mr. Holden that we propose to move the freight district a mile to the south. On the contrary, we propose



## THE RAILWAY TERMINAL PROBLEM OF CHICAGO

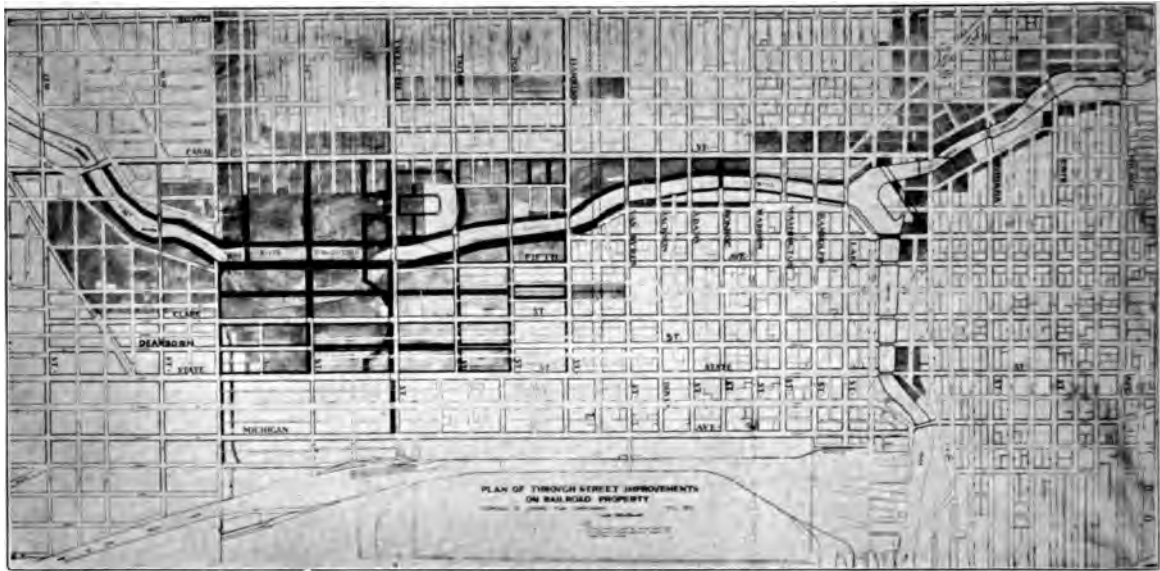




Plate 10.

KEY:  Railway property.  Streets widened or extended.

### PLAN OF THROUGH STREET IMPROVEMENTS ON RAILWAY PROPERTY PROPOSED BY THE CHICAGO PLAN COMMISSION

The widening and extending of streets is effected almost entirely on railway property.

to bring the freight district closer to the heart of the city than does the Pennsylvania plan. We propose to devote to freight and warehouse facilities and to wholesale business the entire area now held by railroads along the river bank on the west side. This will be the new wholesale section of Chicago, the present wholesale section—now located on territory which is becoming too valuable for that use—being devoted under our scheme to retail business. Warehouses will be built solidly over the tracks, except at the streets.

How these warehouses are to be built will be a matter of mutual arrangement between the wholesalers and the railroads. The railroads are just as much interested in that proposition as the wholesalers. The Pennsylvania proposes to make such a development over their freight terminals on the west side, if permitted. Under our plan we would cover up the railroad tracks so there would be no menace to property values and no offence to the eye.

All the world's transportation experts agree on the importance of water contact with rail terminals. Our plan provides for such contact. Along the river north of 12th Street, two street levels are provided, a lower street serving the river traffic and an upper one serving the warehouse district. Our ideas for river development follow those of Paris. There they have quay streets, and upon the upper level of the abutting streets are located handsome buildings.

Freight Plans—  
The New  
Wholesale  
District

Water Contact  
Established

## PROPOSAL OF THE CHICAGO PLAN COMMISSION

Objections have been raised to warehouses and freight yards along the river on æsthetic grounds. Why cannot attractive and substantial warehouses be built over the railroad tracks similar to the wholesale house of Marshall Field & Co., for instance? Instead of our river being the most negligible phase of Chicago life, it could

Warehouse  
District May be  
Made Attractive



Plate 11.

### BIRD'S-EYE VIEW OF PART OF CENTRAL DISTRICT OF CHICAGO SHOWING PASSENGER AND FREIGHT TERMINAL PLAN PROPOSED BY OFFICERS AND STAFF OF CHICAGO PLAN COMMISSION IN RELATION TO PROPOSED CIVIC CENTER

The civic center proposed in the "Plan of Chicago" is shown here at the intersection of Congress and Halsted streets. One of the objections urged against the so-called "Pennsylvania Plan" is its interference with the plans for the location of the civic center at this point.

and should be made the most attractive. Chicago is richer potentially in that respect than almost any city in the world. The City of Dresden has combined splendidly the æsthetic and the practical in its development of river streets in a manner such as we propose for Chicago, and so has the City of Düsseldorf, famous for its scientific commercial development.

It is said that we cannot carry out our river plan in twenty-five

## THE RAILWAY TERMINAL PROBLEM OF CHICAGO

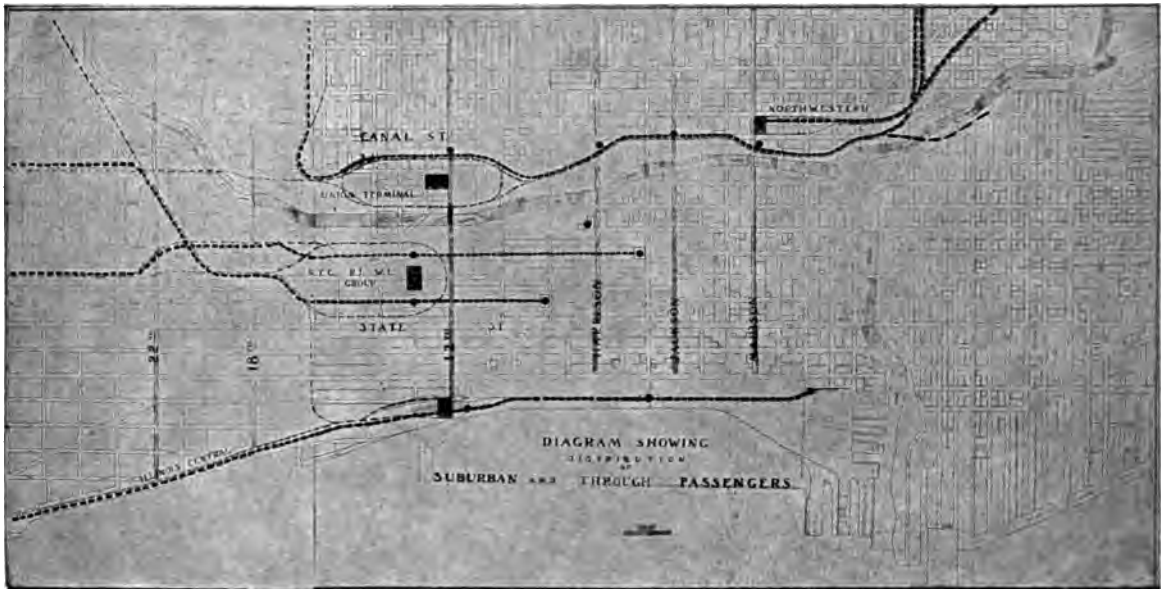


Plate 12.

**KEY:**

- Suburban passenger service tracks.      ● Suburban service station.
- Long distance, or through, passenger service tracks.      ■ Through service passenger stations.

**DIAGRAM SHOWING METHOD OF DISTRIBUTION OF SUBURBAN AND THROUGH PASSENGERS IN CHICAGO CENTRAL DISTRICT AS PROPOSED IN PLAN OF OFFICERS AND STAFF OF CHICAGO PLAN COMMISSION**

- In the plan of the Chicago Plan Commission existing railway stations will be retained as suburban stations, the through traffic (Northwestern excepted) going to 12th Street stations, which will be used for both through and suburban services.

years. With the co-operation of the railroads we can carry it out in from three to five years. We cannot carry it out in fifty or a hundred years if the Pennsylvania's plan is adopted.

Produce  
Market

Mr. Jarvis Hunt has worked out a very interesting proposal to remove the produce center from South Water street and establish it anew in a location near the magnificent warehouse district which we propose to place along the river front. We provide for warehouses east of the Union Passenger terminal on 12th Street and west of the New York Central terminal, which could be used for that very purpose.

Railroad  
Co-operation  
Desired

In conclusion, I want to say that our plan is not one that is final and iron-bound, subject to no criticism and to no change. We do, however, believe it to be the best yet brought forward. If the railroads can be brought together in a spirit of amity a better plan may be evolved—a plan eminently fair, not only to all the railroads, collectively and individually, but also to the interests of the whole City of Chicago.

## PROPOSAL OF THE CHICAGO PLAN COMMISSION

### ADDRESS OF MR. CHARLES H. WACKER—

I would like to add a few words to what Mr. Moody has said in regard to our terminal problem in Chicago.

The terminal tax upon railroads is getting to be practically a ruinous tax. The railroads are coming to realize that they must utilize intensively all their downtown property because of its high valuation. Following the example in other cities, the railroads of Chicago are hard at work developing their terminals in various ways, chief of these being the building of warehouses above their tracks. These improvements over trackways will be occupied by wholesale firms or by manufacturers, and great economy will be effected by bringing all freight directly under the buildings and taking it to the floors above without the expense of drayage. Likewise, the charge for drayage against outgoing freight will be eliminated because freight cars can be placed in berth below the buildings and be loaded directly from the warerooms of wholesalers or manufacturers occupying the floors above. The New York Central has already expended vast sums of money in Chicago and New York in erecting such warehouses, and other lines, notably the Chicago and Western Indiana, are planning similar improvements in Chicago. These roads have in hand today figures which show conclusively how greatly the value of their downtown property would be enhanced by such a scheme of development.

Terminal Tax  
Upon Railroads  
Ruinous



Plate 13.

### PROPOSED FREIGHT WAREHOUSES WEST OF CHICAGO RIVER, PLAN OF OFFICERS AND STAFF OF CHICAGO PLAN COMMISSION

A view of a typical east-and-west street through the proposed warehouse and business district to be located between Canal street and the river and north of 12th Street. Driveways and freight receiving stations are shown along the river.

## THE RAILWAY TERMINAL PROBLEM OF CHICAGO

Water  
Competition  
Should be  
Preserved

Attention should be directed to the fact that it is extremely important that water and rail transportation be kept together, for water transportation is a rate leveler, and, as such, operates to the great interest and profit of the people at large. Today Chicago is woefully deficient in warehousing properties along the river front,—and why? Because practically all the dockage along the river is owned by the railroads. This separation of the water and rail freight systems and the difficulty of erecting additional warehousing facilities along the river without the railroads' consent, I believe, should never be permitted—such a condition is a fundamental error in Chicago's commercial system.

Proposed  
Pennsylvania  
Station and  
West Side  
Property Values

As to the effect which the proposed Pennsylvania Station will have on property values on the west side, I believe the people of the west side are making a serious mistake in expecting higher values when the station is built. The people of the west side should realize that ninety per cent of the passengers using the new station will not buy goods on the west side, but will cross the river to the central business district. On the other hand, I sincerely believe that the kind of development proposed by the Chicago Plan Commission will be of infinitely more value to the people of the west side because it would create a permanent business occupancy.

Inefficiency of  
the Stub-End  
Station

It has been estimated that within the next few years there will be expended in the City of Chicago no less than \$125,000,000 for terminal improvements. It is my opinion that within fifteen years the "stub-end" terminal proposed by the Pennsylvania Company will be inadequate. Despite opinions to the contrary, I believe, too, that I am right when I say that, after expending \$25,000,000 or thereabouts for its station, real estate and other items included, the Northwestern Road today lacks sufficient facilities in that new station for handling its traffic. I speak from my own experience. Within three months I have come in from Winnetka three times and have had to wait each time for a train to back out to let my train in. And I also know I have had to walk to the very end of their long depot to get a train, the third one in line. In view of the great sums of money involved and of the inconvenience to the traveling public, it is apparent that the time is now come for Chicago to oppose the stub-end railway station.

The railroads should be brought together to consider this matter seriously and then, if the people of Chicago will only stand firmly together, we can work out a good solution of this problem which will be to the interest of all parties concerned.

### III. PROPOSAL FOR THE REORGANIZATION OF THE RAILWAY TERMINALS OF CHICAGO

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AN ADDRESS BEFORE THE CITY CLUB OF CHICAGO, JUNE 5, 1913, BY JARVIS HUNT,  
ARCHITECT

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IN looking over the map of Chicago [on the following page] you will see that in the very heart of the city there is a square mile of area occupied by the railroads through which streets cannot pass. It is at once apparent that this central blockade is one of the causes of the congestion in our streets, since, to find its way from the central part of the city southward, traffic must now go around the railroad area and necessarily crowd the surrounding streets. If, on the other hand, streets were cut through the railroad area, traffic, taking its natural course, would flow easily through this section of the city and would not be forced to a few streets, causing undue congestion, as at present.

Railway  
Property a Serious  
Obstruction to  
Downtown  
Streets

We know, moreover, that all this area is to be revamped in the near future, as all the railroads therein must soon add to their passenger and freight facilities. We except from this statement only the Northwestern, which has recently built a new station, but even this new station in a few years will have to be enlarged.

Having, therefore, a square mile of area in the center of the City of Chicago already devoted to the railroads, we have such an opportunity to plan our steam terminal facilities as has never before been presented to any city of importance. In considering this subject of railway terminals we are concerned only with property now owned by railroads and, therefore, the purchase of new land does not enter into the problem.

As a result of the occupation of a large downtown area by the railroads, the nine north and south streets of the broadest part of the downtown section ("loop" district) are choked down in number to three streets and one boulevard at 12th Street. These four avenues are the only connections of the downtown area with the rapidly growing great south side. Railroad property also shuts off the west and southwest sides from communication with the downtown section. The north side is hampered by the conditions on South Water street, which during the busy hours of the day practically form a blockade. In order to handle more freight and passenger traffic, therefore, we must provide easier access between the different parts of the city, and enough streets to take care of the added traffic and to relieve the present congestion.

## THE RAILWAY TERMINAL PROBLEM OF CHICAGO

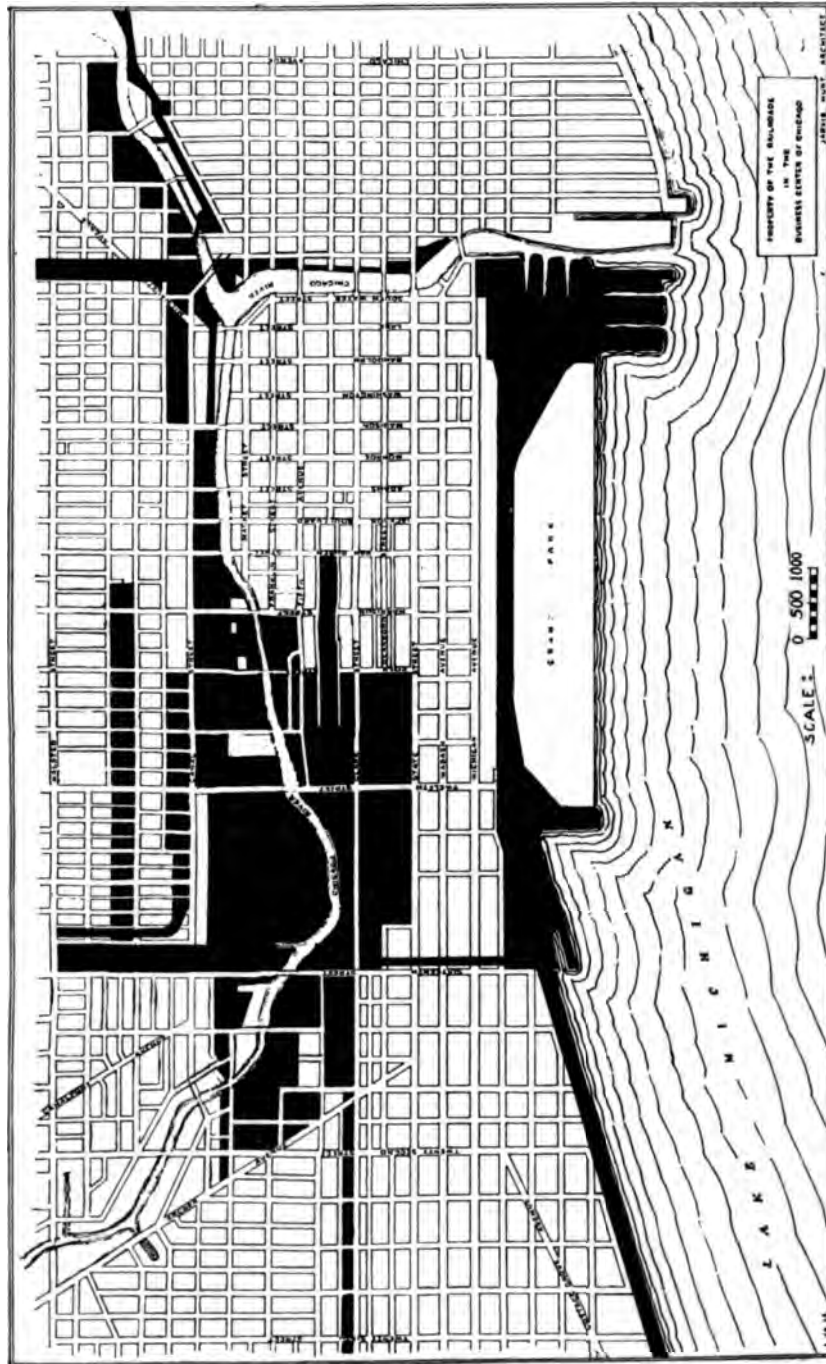


Plate 14.

### RAILWAY PROPERTY OWNED IN THE CENTRAL DISTRICT OF CHICAGO

The dark areas indicate the property owned and occupied by railways in the heart of Chicago. The business district is shown "bottled up" by the so-called "Chinese Wall," preventing normal expansion. The map was prepared by Mr. Jarvis Hunt.

## PROPOSAL OF JARVIS HUNT



Plate 15.

### THE RAILWAY BLOCKADE SOUTH OF POLK STREET

A bird's-eye view in Chicago looking southward from a point above Dearborn and Polk streets, showing mismanagement of valuable property by railways. An intelligent and intensive utilization of this property would be profitable both for the railways and for Chicago. Mr. Jarvis Hunt's proposal would release all of the property shown in the foreground of the illustration from railway occupancy and open up the much needed through streets southward.

In planning terminal facilities, we should avoid the common error of providing only enough facilities to take care of the traffic for a few years. The continued disruption and enlargement of terminal facilities—always due to bad planning—is one of the most expensive items of railroad economy, and is also most harmful to the public. Any plan that does not make ample provision for future expansion without disrupting what is built today, that does not provide for at least five times the capacity now required, should not be considered.

The Elements  
of Terminal  
Planning

We note, moreover, that the surface and elevated transportation systems of this city are to be remodeled and that subways are being planned. Any plan for terminals, especially passenger terminals, which does not take into consideration these proposed changes and does not conform to them so as to obtain the most efficient form of transportation to and from the terminals, should not be considered.

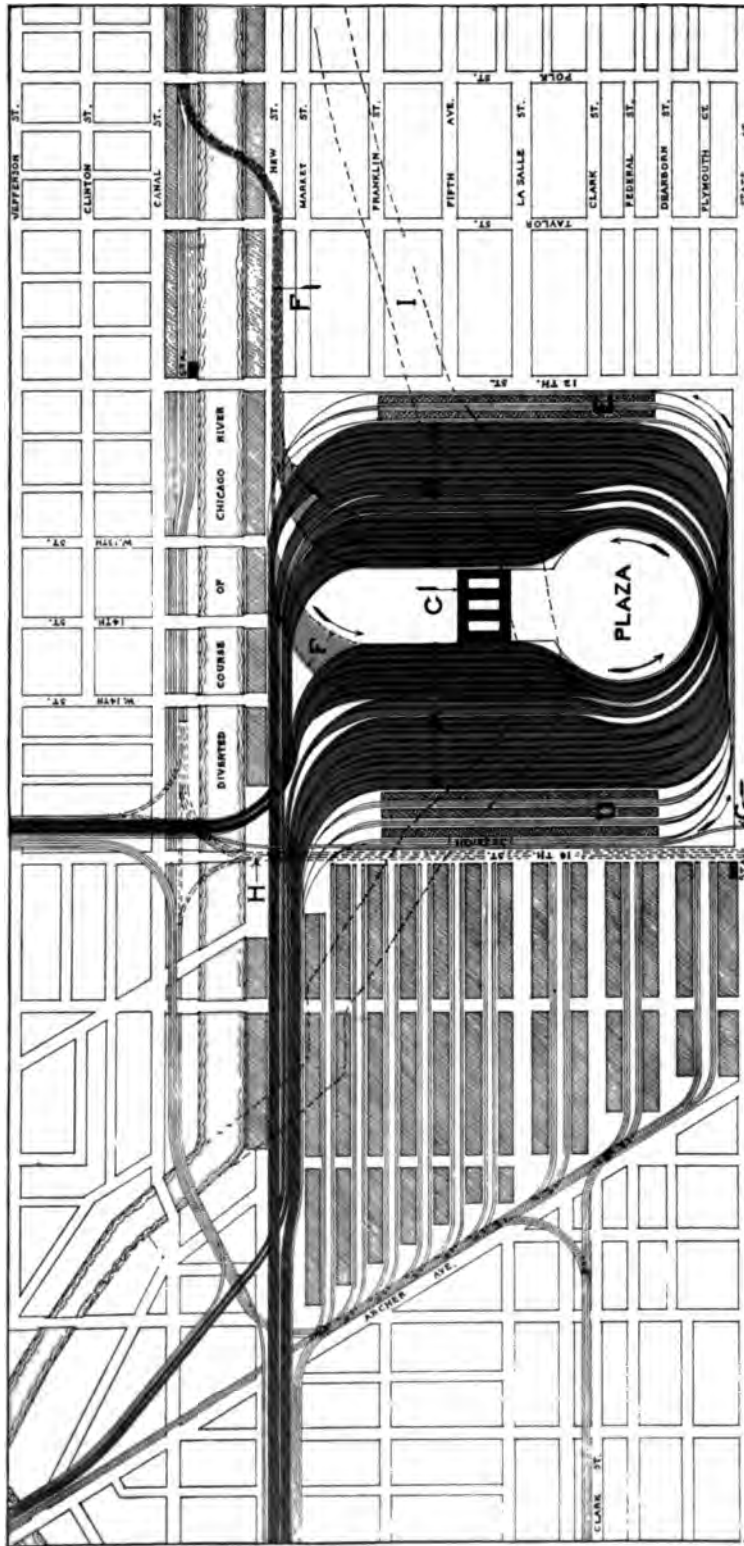
The economical and rapid handling of our mails, parcel post and express should be an important consideration in any plan.

As to freight: No proposal for a freight terminal should be considered that does not make use of water transportation. Easy access to freight terminals by streets should also be a fundamental part of any plan for handling freight. Likewise the useless transfer of less-than-carload freight downtown should be done away with.

In studying our own specific needs we must not overlook the experience of other cities, not only in this country, but also abroad.



# THE RAILWAY TERMINAL PROBLEM OF CHICAGO



**KEY:**

A. INCOMING PASSENGER STATION.  
 B. OUTGOING PASSENGER STATION.  
 C. GENERAL WAITING ROOM.  
 D. MAIL AND EXPRESS ROOMS.  
 E. EXPRESS ROOMS.

**PLATE 16.**

F. NORTH DIVISION PASSENGER TRACKS ENTERING AND LEAVING TERMINAL IN A SUBWAY.  
 G. ST. CHARLES AIR LINE (C. & N. W. RY.).  
 H. SUBWAY FOR SUBURBAN R.O.P. BRANCH OF CHICAGO RIVER.  
 I. PRESENT COURSE OF SOUTH BRANCH OF CHICAGO RIVER.

**THE "LINK" PASSENGER TERMINAL AND THE CENTRAL FREIGHT DEPOT PROPOSED BY MR. JARVIS HUNT**

The area occupied by the passenger and freight terminal proposed by Mr. Hunt is bounded on the north by 12th Street, on the east by State street, on the south by Archer Avenue and on the west by the proposed new course for the Chicago river. The northern half of this area is devoted to the long distance passenger service, while the southern half is utilized for freight houses and elevated and subway freight tracks. It is intended that all in-bound freight be delivered to the warehouses over elevated tracks, and all out-bound freight be sent away over subway freight tracks. All freight is thus handled by gravity to and from wagons at street level.

The south, southwest and west division passenger tracks are all elevated; the north division tracks are below street level. Each platform for the incoming trains (in station A) is a complete "unit" station in itself, with egress to the street directly below the elevated tracks or directly above the subway tracks. Unit stations are similarly placed on the opposite, or outgoing, side of the terminal (station B) with entrance directly from the streets. Trains enter station A, loop around the plaza, and leave the terminal from station B.

All city streets pass unimpeded through the terminal area.

At 16th Street the suburban service, shown on page 36, connects up with the long distance, or through service.

## PROPOSAL OF JARVIS HUNT

Features in other cities that are notably defective we should avoid, and features that are good we should adopt so far as possible, and improve on if we can.

Taking up now the "link" plan for a passenger terminal, our first operation would be to move the channel of the Chicago river westward, straightening its present meandering course into a new channel to be parallel with and 175 feet east of Canal street (from Van Buren to 20th). Then we would extend all streets running south from the downtown district straight through the area now occupied by railroad tracks and the river, and connect them with corresponding streets on the south side. The west side streets which formerly stopped at the railroad blockade, we would run across the river and straight through the railroad property, thus opening communication westward. In this way we provide many new and wide streets, not only to allow an easy flow of traffic through this formerly restricted area, but to take care of the added traffic which will result from the re-vamping of our terminals.

A "Link" Plan  
Passenger  
Terminal

We divide our passenger service into two classes, through and local. We plan to bring into this scheme all roads, excepting the Northwestern and possibly the Illinois Central; should these roads not be included in the "link" plan, provision is made for them to operate independently.

We propose to handle the through service on our link between 12th and 16th Streets. Ninety per cent of this service—except for that handled by the Northwestern Railway—comes to 12th Street today, but it is handled by five separate stations which are not connected. Unless some such plan as here proposed is adopted for linking up these terminals, a supplementary, interconnecting system of local transportation, like the one now existing in London, will have to be built at large expense and great inconvenience to the public. Therefore, we have planned for these through lines a natural connection, or "link," the tracks to be above street level. The linking station is to be located between 12th and 16th Streets, the lines constituting the link forming an oval. By stopping our trains on the south side of this oval for all incoming passengers and on the north side for all outgoing passengers, we embody in our scheme an important feature in modern terminal planning, that of avoiding a conflict between incoming and outgoing crowds, such as always occurs in a stub-end terminal.

We have planned this great station on the unit system; that is, we provide two tracks to a platform with sufficient general utility space for concourse, lobby with ticket office, baggage rooms, waiting-

# THE RAILWAY TERMINAL PROBLEM OF CHICAGO

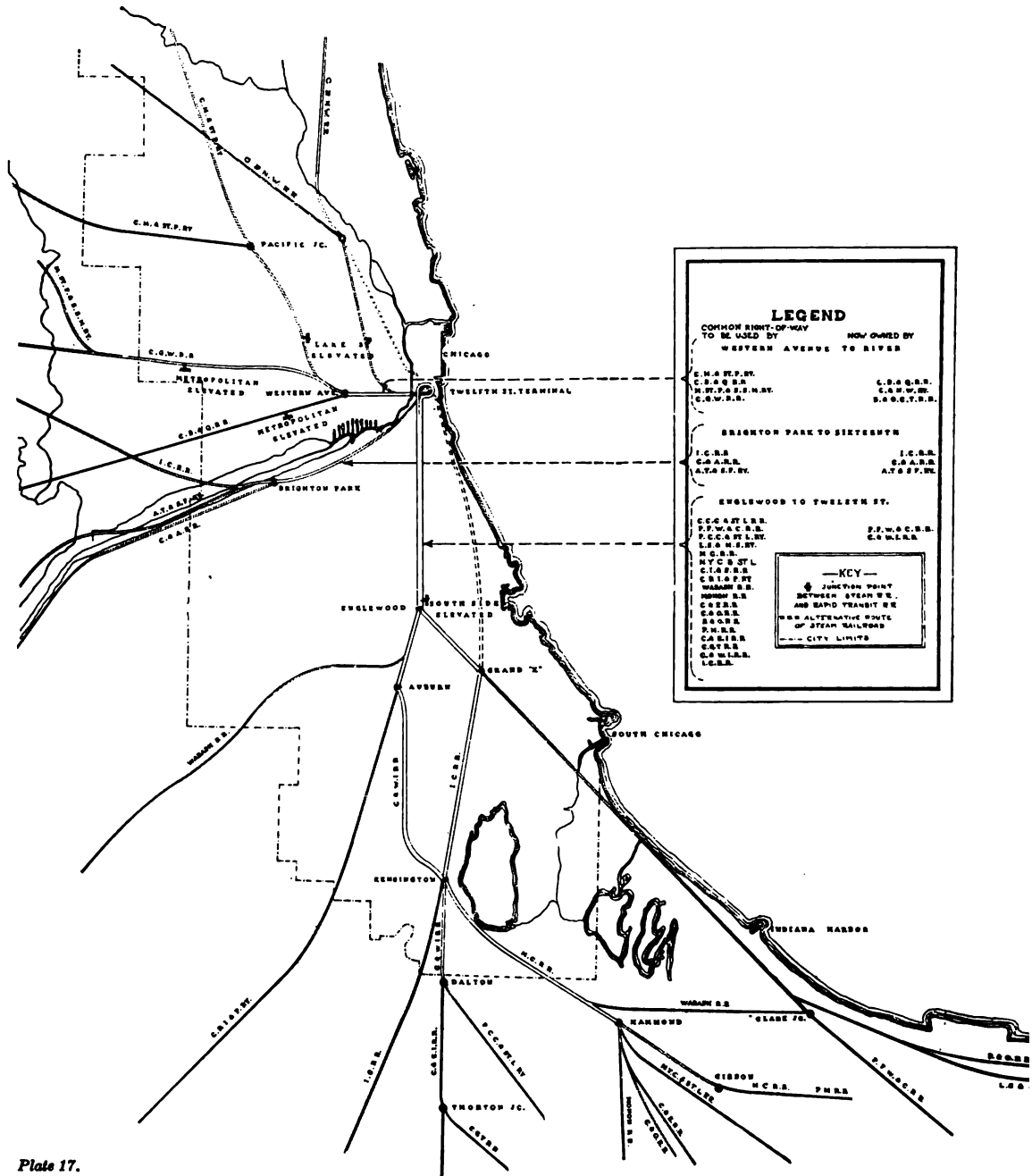


Plate 17.

## COMMON RIGHTS OF WAY PROPOSED FOR RAILWAYS ENTERING CHICAGO

By MR. JARVIS HUNT

The present tangled network of railways, crossing and criss-crossing in order to reach downtown terminals, is supplanted by an orderly grouping of roads, with few crossings, on main rail-highways. The three main highways showing entering the central district are "linked" together at the 12th Street terminal.

The junction points between elevated local transit and railway service suggests a possible co-ordination of the two away from the downtown district.

Alternative routes are indicated for both the Northwestern and Illinois Central Railways.

## PROPOSAL OF JARVIS HUNT

room accommodations, etc., thus making of each platform a complete unit station in itself. Therefore, having provided enough general utility space for each unit, and having placed these units side by side, there can never be any congestion in the station proper. In a large station, if we are compelled to walk from one end to the other before finding a stairway or escalator to our train, we traverse an excessive distance; but in the "link" plan, in which the streets of the city run directly under and at right angles to the trains, passengers are introduced by elevator or escalator directly alongside of their trains. Thus we follow a primary rule in good terminal planning, that of bringing the public on entering from the street as near as possible to their trains.

A Multiple  
Unit Station

To make the station easily accessible we have provided for an increase in the number of streets leading southward from the "loop district." In the loop district today are nine north and south streets. We propose to increase this number to twelve a block north of the station, and to fifteen at the station itself. As we approach the terminal zone, in this plan, the number and the width of the streets increase, thus providing for additional traffic and obviating all possibility of congestion.

Accessibility

In our plan we have provided for ten times more street area than the combined street areas in front of the Northwestern Station, the Grand Central Station, the Polk Street Station, and the Illinois Central Station, so street congestion at the "link" station is out of the question. We have provided ample facilities not only to relieve present conditions but to take care of the future.

We propose in this 12th Street link not only to take care of through passenger service, as already outlined, but a part of the suburban service as well. It is planned also that suburban service shall be connected with this station. Our plan provides capacity for six times the suburban service that is handled in all Chicago today. Moreover, we propose to have subsidiary suburban stations on the railway trunk lines in the north, northwest, west, south and southwest sides of the city. These subsidiary stations will relieve the service downtown and will provide for the local collection and distribution of passengers. They will be enlarged from time to time as the service may demand.

Local and  
Suburban  
Service

Our "link" will be constructed to-day to take care of the city's needs for the next twenty years, but we have provided also for additional capacity as required from time to time beyond that period. This capacity can be added without interrupting traffic, or tearing down any part of the terminal first constructed. Enough future

# THE RAILWAY TERMINAL PROBLEM OF CHICAGO

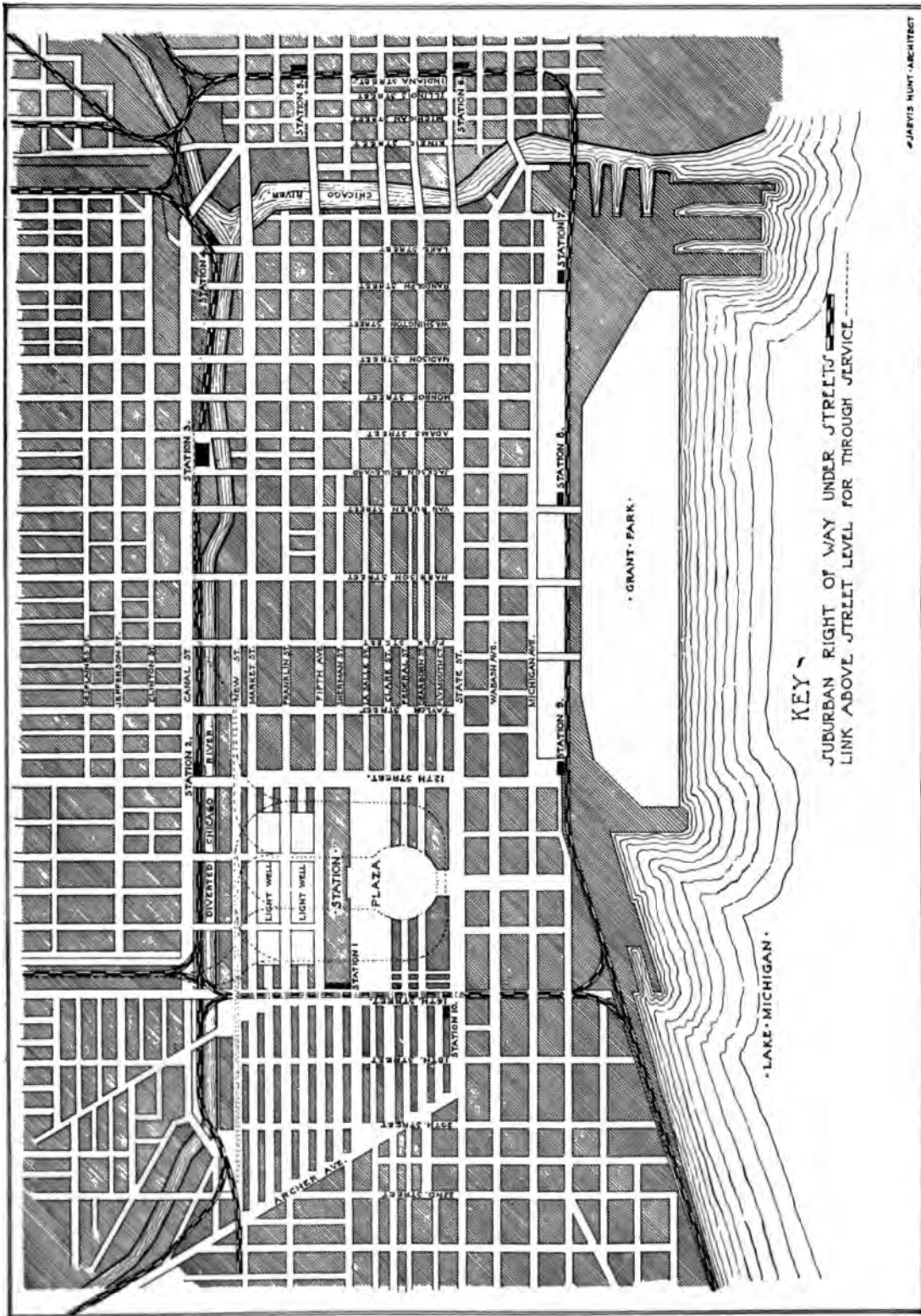


Plate 18.

PLAN SHOWING SUBURBAN SERVICE IN ITS RELATION TO THE LONG-DISTANCE TERMINAL AND THE DOWNTOWN DISTRICT OF CHICAGO — A PROPOSAL BY MR. JARVIS HUNT

All through, or long distance, passengers will be brought to the "link" station at 16th Street. But suburban trains will carry their passengers around a great loop encircling the downtown district — the right-of-way running underground along Canal street on the west, Indiana street on the north, Grant Park on the east, and 16th Street on the south. The suburban trains would cross under the river in tunnels. At 16th Street all suburban trains would connect up with the long distance service.

## PROPOSAL OF JARVIS HUNT

capacity, we believe, has been provided to take care of the traffic in this area for all time.

Local and suburban service, however, we propose to handle mainly on a circular route running below the street surface. Beginning at 16th Street near Canal street in a subway, open to the air, this line runs north parallel to Canal street from 16th Street to Kinzie and the north branch of the river; then it crosses the river in a tunnel and goes eastward under Indiana street; at St. Clair street it turns south, crossing the river again in a tunnel and coming out on the Illinois Central right-of-way, which it follows, open to the air, south to 16th Street; here it turns west in a tunnel under 16th Street, completing the circle. If the Illinois Central right-of-way cannot be used, we can go under Grant Park without disturbing its surface or impairing its beauty in any way, and then down under Michigan boulevard to 16th Street. All steam roads connect with this circle, so that local and suburban trains from any part of the city or its suburbs may reach any station along this route and so facilitate the delivery of passengers in the downtown district. In the same way we can change directly from one suburban train to any other, since all run on the common circular route.

All suburban trains on this circle will connect with the 12th Street "link," so we have direct connection from local to through transportation from all parts of the city. Moreover, this circle will connect with all surface street car lines, and the 12th Street "link" will connect with all surface lines, elevated railways and subways, so that we have a simple and direct way of reaching by street car all steam transportation facilities—local and through. The result will be a simple and well distributed service through the city.

Our freight scheme is as follows: Incoming freight is to be brought in above street level, and outgoing freight to go out below street level, south of 12th Street. There are no freight or passenger tracks on street level. On the downtown tracks we expect to handle only the freight that goes to the downtown zone. We do not propose to disrupt, in our remodeling, all Chicago freight as some of the critics of our plan have stated.

The Freight  
Scheme

Along Canal street we plan to have freight warehouses. We provide for freight warehouses in the downtown district easily reached from all portions of the city and having six times the facilities we have today for receiving and delivering freight. In our "link" plan we have always claimed that the property north of 12th Street and east of the river is too valuable to be used for freight purposes. In the area we propose to remodel, there are delivered daily 7864

## THE RAILWAY TERMINAL PROBLEM OF CHICAGO

tons of less-than-carload freight, not including transfer freight which we do not bring into this area. Allowing 5 per cent on the value of the property now in use but which we could release from railroad occupancy, there is a charge for the use of this property of \$4.50 against every ton of freight brought into this area. To state it in another way, the railroads simply by retaining this area under the present layout are imposing a tax on shippers which is equivalent to the cost of hauling all freight to this downtown district 600 miles.

There are 25,000 tons of less-than-carload freight handled in this city by the railroads per diem, one fourth of which is transfer freight. This class of freight is handled twice and also teamed to other roads, making a handling charge of \$2.40 per ton. This freight under our plan can be taken off our streets and its handling reduced to a cost of fifty cents per ton. Moreover, experts have figured that our plan for new streets and warehouse facilities would cut the cost of teaming freight in our downtown section practically in half. Our shippers should give this consideration.

By straightening the river and bringing our freight to warehouses along the east side of the river we will have a mile and a half of warehouses and dockage connections with the railroads. If necessary this can be repeated on the west bank of the river, giving three miles of water connections with the railroads, something which in this city is sadly lacking. In this way rail and water transportation can be brought together. This improvement has been reported on at length and commended by our Harbor Commission.

Parcel Post  
and Mail

Parcel post and mail service can be handled so expeditiously and economically with the "link" plan that its use will make possible a large saving to our post-office department, where the transfer of mail alone is an important item. As a rapid distributor of mail and express, the plans which we propose will greatly increase the efficiency of the city's postal and express services.

Cost of the  
'Link' Station

The cost of our proposed station will be half as much as if the present heterogeneously placed stations were enlarged and rebuilt on practically the same locations. The cost of operating our station will be half as much as the cost of operating these scattered stations at present. We will release from railroad occupancy ground valued at \$200,000,000, making such ground a source of profit to the railroads instead of a tax on the shipper, as at present.

Centralization  
versus  
De-centralization

In the discussions of this subject there have been numerous references to various cities abroad which are served by separate stub-end terminals, but the persons who cited these examples do not, at the same time, refer to the vast expense to which these cities

## PROPOSAL OF JARVIS HUNT

had been put to connect their different terminals, or to the time wasted by the traveling public, the consumer and the shipper, due to their faulty plan of terminals.

London, Paris, Berlin, New York, or any other great city would jump at an opportunity such as is now presented to Chicago to solve its transportation problems. But instead of that, the opponents of our plan would still adopt in this city a similar scattering of railroad facilities, instead of co-ordinating and conserving them.

To remodel their facilities, the railroads of Chicago will have to have special ordinances granted by the city. Because of this, we now have an opportunity to obtain proper consideration of this subject and proper concessions from the railroads. Therefore, a hasty settlement of this question will certainly not be the proper one. The problem should be given careful and sufficient study before we jump at any proposition.

The case at issue today is the granting of ordinances for the construction of freight and passenger facilities on the west side by the Pennsylvania group. The Pennsylvania Company knows that if the pending ordinances are passed and they build according to their submitted plans they will force the other railroads to build in practically their present locations. The result will be that instead of obtaining relief from the present bad conditions these conditions will be perpetuated and in time will grow unbearable.

Criticism of the  
Pennsylvania Plan

The Pennsylvania's proposed passenger terminal is of the discarded stub-end type where incoming and outgoing traffic are not separated and where passengers have to walk past the baggage, mail and express cars to get to transfer platforms, increasing the distance to and from trains to an abnormal extent and causing congestion. The capacity of this proposed station is so small that in a few years it will be obsolete.

The Pennsylvania's freight plan is so obtuse I have not been able to figure it out except in some details. Under that plan, they propose to push an elevated obstruction still farther into the heart of the city. With the other railroads occupying their present locations, this structure will practically make the west side inaccessible, the backyard of Chicago. The Pennsylvania has made no provision for additional street capacity to take care of its added traffic. Its makeshift of opening streets under warehouses with no new streets to feed them is puerile.

Moreover, the railroads which are now asking these privileges from the city have not considered street transportation at all. As they admit, 95 per cent of the passenger traffic is bound to and from



## THE RAILWAY TERMINAL PROBLEM OF CHICAGO

the east side of the river. There is only one line of street cars which can possibly serve this station from the business district and that is blockaded by a drawbridge. Such a blockade, according to the roads' own statement, should be avoided at all costs.

They have not considered the combination of rail and water transportation at all.

The gentlemen representing the Pennsylvania and the other companies which are asking for this grant threaten the city of Chicago that if they are not given what they ask for they will continue the present nuisance on the west side. This city, however, can and should pass proper and just ordinances regulating steam terminals and force these gentlemen to listen to reason.

The additional area which the Pennsylvania proposes to take will convert present business property to railroad uses and so—because of our method of taxing railroad property—will add a large amount of taxation to the west side. The “link” plan at 12th Street, by releasing from railroad occupation not only this west side area, but also \$200,000,000 of property now occupied by the railroads on the east side of the river, will give this city a large increase of income.

I will say in conclusion that I will produce at the proper time an able contractor, under good and sufficient bond, who will guarantee to have the 12th Street “link” plan in operation within three years, and will guarantee the operation of train service during this interval.

“Link” Plan  
Possible in  
Three Years



#### IV. PROPOSAL FOR THE REORGANIZATION OF THE RAILWAY TERMINALS OF CHICAGO

ADDRESSES BEFORE THE CITY CLUB OF CHICAGO, JUNE 6, 1913, BY MESSRS. ALLEN  
B. POND AND IRVING K. POND, OF POND AND POND, ARCHITECTS

DRESS OF MR. ALLEN B. POND—



AS Chicago grows from a city of two and a half millions to one of from four to seven millions it is perfectly obvious that more than one business center and perhaps more than one civic center will be required. On the other hand, there will always be reasons why certain classes of business can be more readily transacted in the present business center than anywhere else and why the people of the city and strangers will desire to come in increasing numbers to this point. There will, therefore, in my opinion, no matter how the city may grow, always be a demand for a normal, natural growth of the present business area.

The central business district of Chicago now is greatly restricted in size. Shutting it off on the east are Grant Park, the Illinois Central Railroad and the Lake. We could extend the business center by filling out into the lake but this would involve so many legal questions and such extended negotiations with the state and national governments, that it is practically out of the question except as a last resort.

Difficult to  
Expand the  
Central Business  
District

Expansion to the north is interfered with by the river with swinging bridges and the railway trackage on the north bank. An industrial and manufacturing district has been growing up along the river and the lake during the last few years, further restricting the northward expansion of business. The business center, therefore, can extend to the north only with considerable difficulty.

On the west side, we are confronted by railway tracks and by the river. Although the present difficulties of expanding in this direction are great, the business district can be extended to the west probably more easily than in any other direction. It is entirely possible in spite of the railways to open up practically a free passage to the west side between 12th and Lake streets. This fact was observed by the engineers of the Chicago Plan who, for that reason among others, proposed to place the civic center of the city west of the river and to open up additional streets to the west side.

Owing to the difficulty of expanding in other directions the business district has been growing south, but the so-called "bottle neck"

## THE RAILWAY TERMINAL PROBLEM OF CHICAGO

Plans for  
Reorganization of  
Terminals  
Must Permit  
Downtown  
Expansion

at 12th Street caused by the excessive occupancy of land by the railroads throttles its growth at that point. An attempt was made last year when the so-called "Lake Front Plan" was before the public to widen this "bottle neck" but this attempt was successful only in part.

We may then apply to any proposed solution of the railway terminal problem, both freight and passenger, this test: Does it allow—and to what extent, and how—for a normal, natural growth of the central business district? If it allows for better communication than we now have, to that extent it is good. If it makes no change, it may be debatable but hardly good. If it restricts still further the growth of the central business area, it is by this test vicious, whatever other virtues it may have.

Wasteful Use  
of Land by  
Railways

Close students of the railway situation in Chicago have for some years past been noting the wasteful use of land by railways—especially in two directions, namely:

### 1. *Use of independent rights of way and terminals.*

It is obvious that if individual railways or groups of railways choose to come into the city, using independent rights of way, they will utilize much more land than would be necessary if these facilities were properly co-ordinated or combined.

### 2. *Use of single level.*

Ordinarily the land used by railroads is occupied only on a single level. It is not double-decked to any great extent. For a given amount of service, therefore, a greater extent of railroad holdings is required. This over-occupation of land in the first place tends greatly to restrict the growth of the business district, and, in the second place, is in itself extravagant. The land is of enormous value and the buying and holding of it entail heavy expense upon the railroads and this in turn becomes a tax upon the people of the city and upon all who use the roads. In any terminal reorganization, intelligent thought should be given to a less wasteful use of land by the railroads, providing by a re-arrangement of rights-of-way and terminals and by double-decking, if practicable, for its more intensive use.

Stub-end Stations  
Create Necessity  
for Additional  
Transportation

Another consideration in terminal planning in Chicago should be this: Owing to the fact that the railways use Chicago as a terminal point and do not pass through it, we have a series of independent downtown stations, all on the stub-end plan—one at Van Buren street, another at Polk; another at Adams; another at Madison; another at Harrison; another at 12th. We are, therefore, compelled to construct at great expense additional facilities for intra-

## PROPOSAL OF POND AND POND

mural transportation and for connections between the various trunk line routes. If the railways could be correlated so as to bring about better connections between stations and a greater use of the railroad rights of way for intramural and suburban traffic—as in Berlin and to a less extent in Vienna—we should have a much higher degree of transportation efficiency without incurring a greater expense than necessary for subways and other local transportation facilities.

We may, therefore, say that from the operating standpoint, no solution of this problem should be considered which fails to provide for expansion of the business district, which recklessly increases railroad holdings already in existence, or which fails, by lack of rational co-operation to give to the public proper transportation—through and intramural—over such holdings as have already been acquired or are to be acquired.

I propose to test the various terminal schemes that have been thus far suggested by the principles which I have just stated. In 1904, Frederic A. Delano, then detached from railway employment, but speaking as a skilled railway man, put out a little brochure in which he proposed to line up the passenger terminals along 12th Street, starting from State street and running west. That plan made for the convenience of passengers changing from one road to another, for a saving of time in interchange and for a certain economy in railroad operation—although not the maximum. Mr. Delano left for the freight service the territory already in the hands of the railways from 12th Street to Polk. His scheme called for an upper roadway on 12th Street, giving passenger access to this series of terminals, and for a lower level on which should be teaming tracks and freight ways.

The "Delano"  
Plan

The objections to that scheme are several. In the first place there was no provision for thorough-going, working co-operation between the railroads for increased economy and efficiency by a common use of railroad highways. The freight terminals were to be interposed between the passenger stations and the heart of the city, involving the needless trucking of freight in the business district, obstructing the growth of the business center to the south and making almost inaccessible, except at Michigan avenue or Canal street, the proposed elevated roadway in 12th Street.

The Commercial Club in the Chicago Plan book put forward two alternative schemes. One proposal was for a series of railway terminals west of the river, extending from Lake street to 12th, between Clinton and Canal. It did not provide for maximum co-operation between the railroads, but it suggested, as a means of

The Commercial  
Club Plan

## THE RAILWAY TERMINAL PROBLEM OF CHICAGO

getting a certain amount of co-ordination between them for relieving the pressure in the downtown business district and of thus permitting growth to the westward, either that these roads be put in subways or brought in on an elevated structure, both schemes being approved as practicable. The second or alternative solution offered was the 12th Street or Delano Plan. Later on the Plan Commission adopted the 12th Street program and all further work by this group of people has been directed to the working out of that plan.

Plan by  
Officers of  
Chicago Plan  
Commission

A new program, however, has been put forward since the publication of the Chicago Plan book. It is the scheme now offered by the executive officers of the Chicago Plan Commission. By this plan a very much higher degree of efficiency has been made possible by the substitution of loop-end for stub-end terminals, but there is no saving to the public in the amount of occupied land and no intelligent and effective co-operation is brought about between the railroads. This program, in common with the proposals of Mr. Delano and of the Commercial Club, still leaves the freight business in the heart of the city north of 12th Street with the objectionable results which I have already mentioned.

The authors of this plan lay great stress at the present time on the necessity of opening the "bottle neck" at 12th Street. I appreciate greatly the public spirited services of the Chicago Plan Commission, and of the Commercial Club before it, in working on this problem. One is tempted to wonder, however, whether the Chicago Plan Commission was "asleep at the switch" when the Illinois Central "South Park" or "Lake Front" deal came down the line. In negotiating this deal there was an opportunity to provide for the widening of that throat at 12th Street in a way suggested by the original Chicago Plan, namely, by carrying Indiana avenue through as a wide street and by creating a new street adjacent to the Illinois Central right of way, adding 66 per cent of efficiency to the streets leading to the south side. This opportunity, however, was not taken advantage of by the Plan Commission. Outside forces did succeed in putting Indiana avenue through, but did not succeed in having provision made for the other new street.

The Chicago Plan Commission was, however, evidently converted by the forcible arguments then presented and have since put forth a program which proposes to provide better access from the south side to the city by straightening the river from 12th Street to 16th Street and by putting through several streets below the station platforms and at the general street level. It is my can-

## PROPOSAL OF POND AND POND

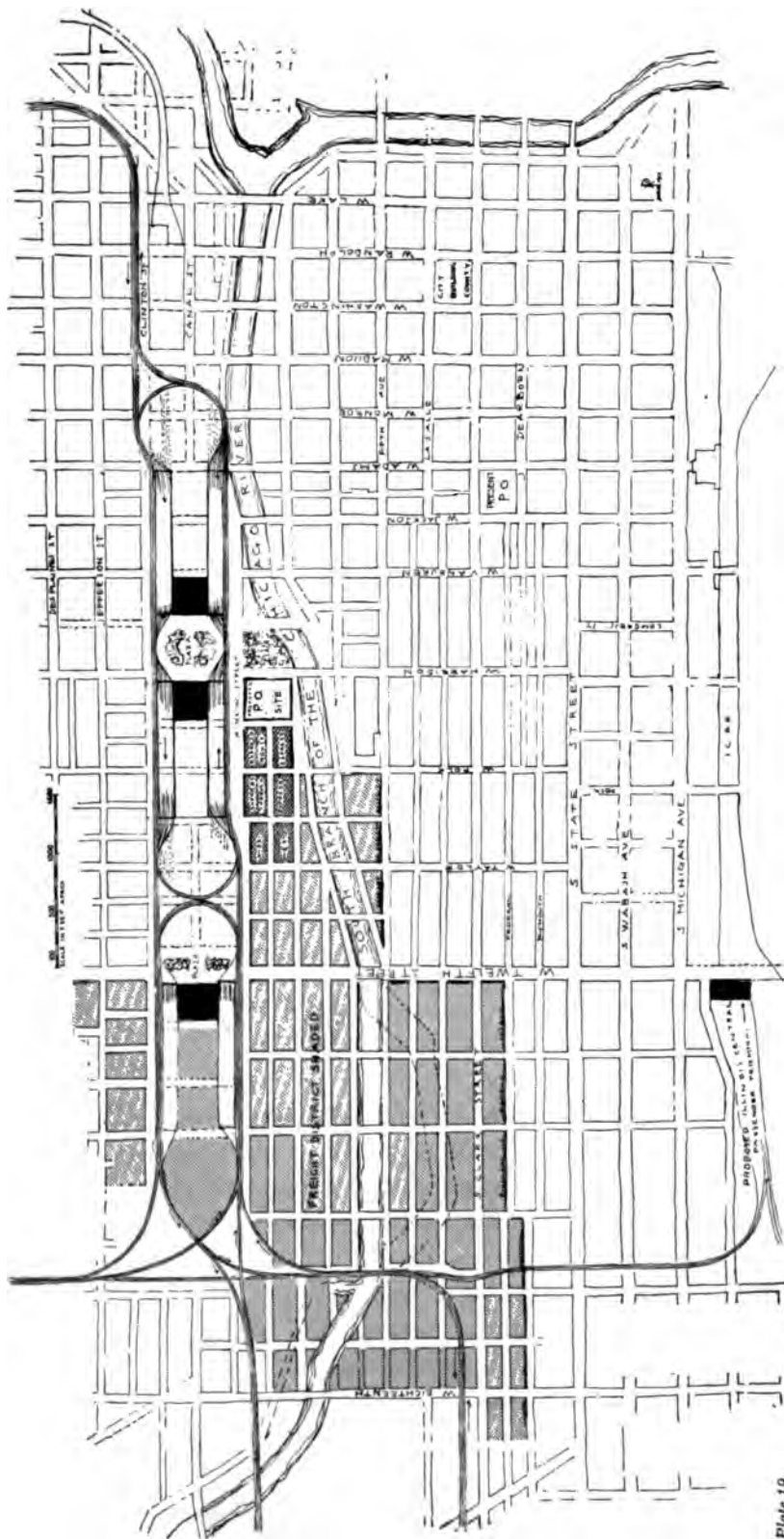
did judgment, in spite of the good intentions of the Chicago Plan Commission, that they have absolutely failed in their attempt to open up communication with the south side by this program. The streets which they propose would have to pass through a broad freight terminal area extending northward from 12th Street. A street which passes through a heavily occupied freight terminal territory cannot be an effective addition to the through streets connecting the center of the city with the south side. It might be a very valuable local adjunct in handling local freight but that very fact would impair its efficiency as a through connection with the south side.

We have, then, against the program of the officers of the Chicago Plan Commission, a failure to attain successful co-operation between the railroads and a continued obstruction—in spite of efforts to avoid it—to the growth of the city towards the south side. This scheme, however, does leave us free for growth towards the west side and towards the proposed civic center.

Mr. Jarvis Hunt has worked out a plan that is admirable in many particulars. He leaves the west side and the south side to 12th Street free, giving room for the growth of the city in those directions. He places a single large passenger station at 12th Street, and south and west of that—having straightened the river to a considerably greater degree than is proposed by the Plan Commission—he places a very large group of freight terminals. Considered solely for a moment from the standpoint of practicability, a freight scheme of this sort, which has a subway for outgoing and an overhead arrangement for incoming traffic, with a distribution of freight from narrow warehouses with narrow streets between, is an admirable program. The criticism of it must be really a criticism of detail, as for instance to the width of streets necessary to allow access without blocking the teaming. Mr. Hunt's plan takes the freight business down to a territory extending from 12th Street south to Archer avenue and 22nd Street and from that point of view is an admirable plan. The "Hunt" Plan

In his passenger plan he provides for a very great saving of land by the use of a single station, but in such a station the distance from the head-house to the outlying wings is very great. Mr. Hunt answers that it is not necessary to go to a central head-house, that he proposes to establish ticket offices, toilet rooms and other station requirements at points where access is given to the several platforms. In other words, Mr. Hunt has provided, not for a single station but for a series of stations in a row, north and south, with

# THE RAILWAY TERMINAL PROBLEM OF CHICAGO



KEY:

Freight district.

Space reserved for express, mail, etc.

Railway tracks.

Station headhouse.

## PASSENGER AND FREIGHT TERMINAL PLAN FOR CENTRAL DISTRICT OF CHICAGO PROPOSED BY MESSRS. POND AND POND

This plan proposes for the use of all Chicago passenger railways — except the Northwestern and the Illinois Central — a two level railway structure connecting a chain of stations on the west side from 16th to Madison streets between Clinton and a new street extending south from the intersection of Adams street with the river. The upper level of this structure would be for long distance, the lower level for suburban trains. The eastern and the western tracks would be connected by loops so that trains could "pull through" or "loop back," as desired. All incoming trains would be operated on the east tracks and from south to north and all outgoing trains on the west tracks and from north to south, eliminating cross movement of trains, separating incoming from outgoing passengers, and making possible through operation of long distance and suburban trains if desired. Passenger stations would be connected by a moving sidewalk.

In the freight plan proposed by Messrs. Pond and Pond, the river is straightened from 12th to 16th Streets and freight yards established on both sides from about Archer avenue and 22nd Street north to 12th and from Dearborn street west to the proposed new passenger station — except that west of Fifth avenue the yards may extend north to Polk. Another yard is established west of the passenger terminal and south of 12th Street. Incoming trains would be operated south of 12th Street on an elevated structure and outgoing trains in a subway so that all freight could be handled to and from cars by gravity.

The proposed new postoffice and the express buildings would be located south of Harrison street and immediately east of the passenger terminal with through service

## PROPOSAL OF POND AND POND

access at several points along the line—all of which will be necessarily confusing to persons using the station. The plan does offer, or might be made to offer, a certain co-operation between the railroads—they do have to come in on a common loop—but this co-operation would be at the expense of simplicity. The operating expense of such a station would be very heavy and the complications brought about by the large number of lines entering the station and by the different kinds of access that would have to be provided for through-routing would be very great.

The Pennsylvania plan for a passenger station between Clinton and Canal streets and between Adams street and Jackson boulevard, a location which is sufficiently convenient in itself for passenger purposes, has one very serious drawback. It provides for no co-operation whatever with any other road. It is one more attempt by a railroad to pick its own place—as the Northwestern did—irrespective of the interests of the traveling public or the city of Chicago.

The  
Pennsylvania  
Passenger Plan

For my part, I see no objection to the Pennsylvania passenger program from the standpoint of the city plan. I see in it simply an extravagant use of land and a very bad piece of railroad engineering. It not only provides for a stub-end terminal but the tracks come to the concourse from both directions so it will be impossible hereafter to develop a loop for either the north or south lines.

From the standpoint of the city, the Pennsylvania freight plan is infinitely worse. Into the heart of the west side, where the plans already considered have left a chance for the city to grow, the Pennsylvania projects a long elevated spur down to Van Buren street. It establishes south of Van Buren a great freight yard, which definitely precludes the opening of Congress street. Access to this yard is by overhead track or, if they please, by subway, but Congress street is blocked. Harrison street is left open, but tracks starting to descend at Polk street come down to grade at Harrison, and as the teaming entrances to the grade-level freight yards are at this point, Harrison street becomes useful only for access to these yards; as a thoroughfare from the business district to the west side it is utterly destroyed. Thus the Pennsylvania's freight plan by cutting off Congress street, by making Harrison street a mere adjunct to the freight yard and by interjecting a heavy freight business in territory now not used by the railroads, cuts the west side from the business district.

The  
Pennsylvania  
Railroad's  
Freight Plan

In working out their program, Messrs. Pond and Pond went back to the first scheme proposed by the Chicago Plan book; namely, a series of railway stations running north and south between Canal

The "Pond"  
Plan



## THE RAILWAY TERMINAL PROBLEM OF CHICAGO

street and Clinton street. The theory of the plan was to build a great rail highway for the common use of a group of railways running north and south and to provide by the use of this highway for the maximum flexible co-operation between all railways. The east group of tracks would be used only for northbound trains, the west group of tracks for southbound. All trains from the south would pass north over the east tracks of this highway, pull into their respective stations and having unloaded, pull out, either straight through to the opposite side of the city or around a loop reversing the direction of travel. Trains from the north would reach the east highway by a loop and would then proceed as the other trains. In this way trains on any group of tracks are kept moving in only one direction, thus avoiding the conflict and confusion which would ordinarily result from the meeting of two reverse movements of travel. By this plan, also, incoming and outgoing passengers are separated and confusion is thus still further reduced. The separation of suburban from trunk line traffic by the use of a double track level—suburban traffic using the lower level, through traffic the upper—is also provided for. To get the same track efficiency, this double level will require just half the ground area of a single level with the same number of tracks.

Through-Routing  
Suburban Trains

It would be possible, too, under this scheme for a train coming in on the Illinois Central to turn in on the St. Charles Air Line, run in to the station and keep on going to Waukegan. It would be possible in the same way to bring a train in from LaGrange, turn it around and take it out to Austin, that is, provided the Northwestern will come in on the program, as it easily could do. It is thus possible to utilize for intra-city and suburban traffic every railway in the city.

This plan proposes that at the present time there shall be built on land which is almost entirely owned by the railways, the first section of this rail highway, with one station to provide for the Pennsylvania group. That station having the head house in the middle will give the maximum facility of access to the individual platforms, for the distance to the head house from any track, incoming or outgoing, will not be great. The suburbanite will have access to his station platform by stairways or ramps, the location of which, of course, will become readily known.

Such a station would accommodate, under any possible system of computation, two or three times the amount of traffic that the Pennsylvania can possibly handle in the station it now proposes to build with its double-header stub-end terminal—a system which

## PROPOSAL OF POND AND POND

is already out of date. The New York Central, after having designed a stub-end station at great expense revised all its plans and proceeded in its new 42nd Street terminal in New York to create a loop end system. The efficiency of a loop or through route system is certainly two and a half times, and probably three or four times, as great as that of a stub-end system.

However, if the railroads should combine, they would not have to make very much use of the loop system. The fact that the traffic goes straight through and out, and the fact that the land at both ends is owned by the railways now, makes it possible, by a slight interchange of land of substantially the same value, for the railways to create their passenger track yards at points where the trains can run straight through to them without looping back. For instance, the Pennsylvania and the Western Indiana lines can place their coach yards to the north and the lines coming in from the north can put their yards to the south, so that instead of looping back they can go straight through. The proposed system, then, admits of efficient working co-operation in suburban and intra-mural service between all the lines. It also permits what in time will be demanded by the travelling public—through routing of trunk lines, by which it will be possible, without any inconvenience, to run trains straight through from Boston to Los Angeles, or from New York to Seattle.

We think Jarvis Hunt was right in proposing to take the freight yards from the district north of 12th Street. In any solution of the freight problem, the river should be straightened from 12th Street to 16th Street and the freight yards moved west to a point which will allow the opening of one more wide street to the south side—a street which is not tied up in the middle of freight yards, but which can be made one hundred or more feet wide. We suggest that there be established on the south side from Archer avenue and 22nd Street not farther north than 12th Street, covering the territory, say, from Dearborn street to the river, a freight yard built on the Jarvis Hunt plan, with a subway for outgoing and an elevated structure for incoming traffic, and that there be established on the other side of the river, west of the proposed passenger highway and loops, exactly the same sort of a yard. That would mean that the Pennsylvania group would have its freight terminal in just about the location it now proposes, except that it would be backed up to 12th Street, and that the "Soo," which also wants to come north of 12th Street, would be compelled to back up.

The co-operation established between the railways would bring about a very large reduction of the area required for the service,

## THE RAILWAY TERMINAL PROBLEM OF CHICAGO

so that the city would have an increased central area for growth, using 12th Street as a boundary on both sides of the river, in a manner similar to that suggested by Mr. Hunt. The central district would have the maximum available communication with the south side and a full opening toward the west side, and a less pressing need for growth upon the north side.

City Should  
Block Ill-Con-  
sidered Plans

The present bearing of this whole terminal problem is to this effect: If it is possible, as we believe it to be, to establish a working co-ordination between the railroads, which will aid in developing and expanding the business center of Chicago, which will bring about a more intensive and efficient use of railroad facilities, the City Council of Chicago today should not permit any railroad to proceed with plans which do not take those questions into account. We certainly should not permit any railroad to preëempt for its station the location which seems to be preëminently fitted for carrying out such a scheme.

### ADDRESS OF MR. IRVING K. POND—

City Railroads  
Should Co-  
operate in  
Deciding  
Terminal Plan

The proposed union station, as has been said, is not a modern type of railway terminal but we do not criticise it on that ground alone. We do criticise the railroads for undertaking, without a knowledge of conditions, to build at a strategic point a station which will forever preclude the possibility of developing a unified terminal system in downtown Chicago. I do not think a large scheme has ever been put up to the roads, or they might be as broad-minded in this case as the Pennsylvania was, for instance, in Washington, where they gave up very valuable property and fell in with the general scheme of beautifying and developing the city.

I have heard it said by many Chicagoans, that it is a benefit to Chicago to hold up through passengers at its various railway stations, make them ride across the city at a cost of fifty cents, buy a meal at one of our restaurants, or stay a night at one of our hotels! I don't believe that we have to develop our great city by preying on travelers. We ought, by co-ordinating our railway facilities, to make travel through Chicago easy for the traveler instead of holding him up and subjecting him to all sorts of unnecessary inconveniences. Then we ought to make Chicago attractive enough in itself to make it worth the while for the traveler to stop.

I want to take up some of the architectural and structural features of our plan. In our scheme the elevated track-way will be entirely enclosed by commercial buildings and, therefore, will not be in any way unsightly. Each one of the street intersections with

## PROPOSAL OF POND AND POND



PERSPECTIVE VIEW OF PASSENGER TERMINAL PROPOSED BY MESSRS. POND AND POND

our terminal may be made attractive and beautiful like the elevated railway terminals at Vienna and Dresden, shown in the Chicago Plan book. The lower or suburban tracks cross the streets on a light hanging structure with a reinforced concrete platform, and a crushed stone roadbed, so as to eliminate noise. The through traffic runs on an upper platform, carried by the heavy construction, getting height and breadth of architectural effect. The street crossings, too, are emphasized by little terminal towers through which the main railway highway passes. The train shed is almost entirely concealed. The high structure that you see in the perspective (Plate 20) is an office building. The towers shown in that perspective would come up as an expression of individuality and beauty. A structure of this sort can be made no less beautiful than the marble arch across Fifth Avenue, New York. It would be for the artistic improvement of the city, if for no other reason than that of eliminating the interminable miles of Roman columns which seem to be a characteristic feature in the decoration of libraries, county institutions, jails, warehouses and railway stations.

Station  
Structure  
Can be Made  
Attractive

Another feature of the plan is this: The area upon which the stations face will be devoted entirely to a Plaza. People coming to the city will not enter then, as at present—or as they will if the Pennsylvania plans are approved—over an unsightly line of train sheds, but through a beautiful park, from which they will get a pleasant impression of the city. A departing guest will leave the city with a final last good impression. First and last impressions, if we want to make Chicago a force in the world today, must be

## THE RAILWAY TERMINAL PROBLEM OF CHICAGO

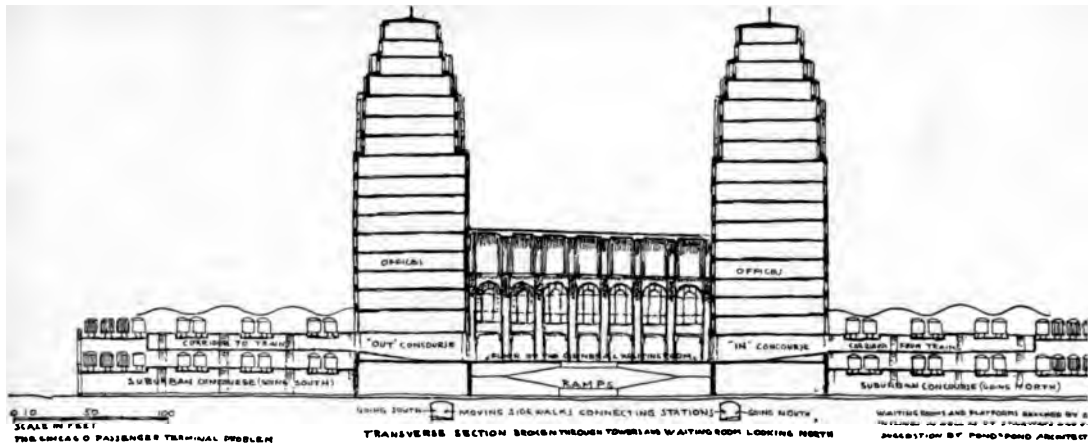


Plate 21.

### TRANSVERSE SECTION OF PASSENGER TERMINAL, LOOKING NORTH—PROPOSAL OF MESSRS. POND AND POND

looked after. They should be based upon something beautiful and attractive.

Facilities  
for Suburban  
Traffic

Now, to get down to some of the practical workings of the station. Suburbanites are well taken care of. Suburban trains, as many as are necessary, can be through-routed, say, from South Chicago to Waukegan or Oak Park, right through the heart of the city. I will say, for Mr. Hunt and for the Chicago Plan Commission, that they have been misquoted and misunderstood in this: they both provide suburban facilities into the center of the city, though not such comprehensive service as is contemplated here. The suburbanite wishing to reach his train, goes up a low flight of stairs to the platform and takes the train that is waiting for him. If he is going in one direction, he takes a train on one side of the station. If he is going in the other direction he will find his train on the other side. The outgoing and incoming passengers are thus not brought into conflict. The two streams of traffic do not meet except on the great Plaza.

Facilities for  
Through Traffic

The traveler using the through line goes by easy ramps, as in the Grand Central Station in New York City, up to the waiting room. There are also elevators and stairs which provide ingress and egress. Ticket and baggage accommodations are located conveniently for those using them. The waiting room may be much larger than that now occupied by the New York Central in New York City and can be made as large and majestic as is desirable. Incoming and outgoing passengers from through trains are not brought together and confusion is thus avoided. When through traffic is overcrowded and the suburban traffic is very light the suburban tracks

## PROPOSAL OF POND AND POND

can then be used for the through traffic. It is so arranged that at night, when the trains are made up, say about ten o'clock, the traveler can go to bed with the trains waiting on the suburban tracks, leaving the upper deck free for the moving trains. The scheme is absolutely flexible. The various parts of the station can be reached with the fewest steps and with the least expenditure of effort.

In the transverse section of the station you will notice two subways. These will contain a moving sidewalk in at least three speeds forming a loop between 12th Street and Madison street and connecting all the stations, on the east side always going north and on the west side always going south. A passenger arriving at one station can reach any other with his bag and baggage by simply using these moving platforms.

Connection  
Between  
Stations

Each of our stations can by these moving sidewalks be connected with subways to the downtown district. These subways would leave the ground probably just beyond Halsted street, so as not to interfere with the traffic there and would take a great deal of the present surface transportation down into the subway. By a system of loops or by transfer stations on these subways passengers using our stations would be able to go to any part of the city. Any one of the stations could be reached from downtown by a walk of a block and a half to the subway connecting with the moving sidewalk. This would relieve congestion on street cars and on the downtown streets and would thus reduce the danger of accidents. The subway system does not have to be built all at once. Lines about a quarter of a mile apart can be put in first.

Subways

We believe that two stations such as we have suggested will serve Chicago for some time to come. There is in use in Chicago today in all the stations, at the most liberal estimate, the equivalent of about seventy-five stub-end tracks—sixty-five is more nearly correct. In each of our stations we propose seven tracks on each side—fourteen in all on each level—and two levels, making the total number of standing tracks at each station twenty-eight. If a through track is worth two and a half stub-end tracks, one of our stations would have the equivalent of seventy stub-end tracks, practically the capacity of all the railroads, including the Northwestern and Illinois Central, in use in the city to-day. If one of these stations provides for the present population needs of the city, two stations would provide for double that population. Still it does not follow that to double the population is going to double the traffic, because, as has been said before, new centers are going to be created to which a part of the suburban and even through traffic will be diverted.

Capacity of  
Stations

## THE RAILWAY TERMINAL PROBLEM OF CHICAGO

Cost

The cost of constructing a system such as we propose would, I think, be much cheaper than a reorganization along individual lines as proposed by the Pennsylvania. The structure would not be any more expensive and the saving in space would be very large.

A double deck system presupposes electrification, of course, but electrification is a very simple proposition in a case like this. At the mouth of the Detroit tunnel, to cite a parallel case, an electric engine is put on any train that may be taken through and at the Canadian side the steam engine is put on again. So, under the scheme which we propose, an electric engine can be used to pull a train through the terminal and the steam engine can be put on again later. In this way, the amount of electrification need not be very large.

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## V. PROPOSAL FOR THE REORGANIZATION OF THE RAILWAY TERMINALS OF CHICAGO

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AN ADDRESS BEFORE THE CITY CLUB OF CHICAGO, JUNE 9, 1913, BY MR. WILLIAM  
DRUMMOND, OF GUENZEL AND DRUMMOND, ARCHITECTS

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IN the accompanying plan, which outlines an intensive utilization of downtown railroad property, we have endeavored to bring out the fact that but one constructive course is open to the city as a PUBLIC POLICY, namely: JOINT USE OF FREIGHT AND PASSENGER FACILITIES IN THE CENTRAL AREA BY ALL RAILWAYS, WITH FREE RAILWAY ACCESS TO MUNICIPAL DOCKS.

A Fundamental  
Public Policy

The plan we submit for the solution of the terminal problem, with a full description indicating broadly the general scheme, was shown with diagrams at the City Club over a year ago. Since then, other plans have been proposed by engineers and architects embodying somewhat similar principles, but these plans are misleading, in that, in making all trains *loop back* over the same route by which they enter the city, nothing would be accomplished but centralization. With the one or perhaps two main station units proposed in other plans the present handicapped condition would be perpetuated, and since our present scattered stations at least have the merit of diffusing a large part of traffic into the downtown streets at many points, the proposed centralization would, to an extent, intensify the present evils.

Before going further into the details of our proposal, we would urge the importance of also making the through-routing of all passenger trains a matter of Public Policy.

Advantages of  
Through-Routing

Through-routing for Chicago means the joining of the present terminal ends of all railroads, providing a connecting link, so to speak, by which the train service of each road may be extended "through and out," using the tracks of another opposite entrant road, all parts of the city in this way being made more easily accessible.

Through-routing, to some extent at least, means joint operation of all railroads at the intensely valuable center of the city, and any feasible structural method of linking the stub-ends of these roads in the central district, even if apparently expensive, will be justified, should it enable the city and the railroads to bring about a highly practical and elastic method of operation and an increase in the efficiency of our railroads at the center of the city.



## THE RAILWAY TERMINAL PROBLEM OF CHICAGO

The student of the situation must see that any other method must necessarily lead either to insurmountable difficulties or to serious drawbacks, chief of these being the great amount of space needed for unsightly railway structures or uses. Then, too, we would call attention to the extreme difficulty of satisfactorily increasing station capacity as needed and the continual interruptions to through-travel, all resulting in an increased cost of railway facilities to the public. Through-routing solves these problems.

Through-routing means that at the same cost, or even less than the present cost in money and labor to the railroads, a much more extensive and a much more convenient system of transportation can be provided for the "whole city."

Through-routing of all local transportation cannot help but be adopted ultimately. The excessive railroad occupation of downtown areas, high transportation cost to the public due to high operating expense, the lack of comprehensive city planning, or "whole city development," looking to the unification of rapid transit lines for local carriage and transfer, and the lack of plans for the creation of "main arteries" for the electrification of steam roads—all will demonstrate, in time, the folly of the present system, which artificially dams up a tremendous volume of traffic at the center of the city right at the height of its flow. On the other hand, we shall see more and more clearly the wisdom of providing free and open channels for the movement and ready dissipation of Chicago's great volume of traffic.

A Railway  
Highway

In any general plan for the supplanting of steam by electric power for the operation of Chicago's railways, parallel rights-of-way should be unified, where possible, in order to obviate the waste of space entailed by using several rights-of-way when one main way would be cheaper and better. An example of a main trunk line into the city is in existence today from the 63rd Street Junction, at Englewood, to the Northwestern Station, on Madison street, over which several roads operate in approximately a straight line with a great saving of space. By establishing such *main rail highways*, leading into the city from the South, Southwest, West and North, and by further concentrating these main highways upon a single common right-of-way downtown, practicable railway through-routing could be obtained.

Passenger  
Stations

On the common right-of-way downtown we propose to build a two-level elevated structure and a subway, thus providing three levels for train movement. This track-way will run north and south between Canal street and the river—the necessary straighten-

# PROPOSAL OF GUENZEL AND DRUMMOND

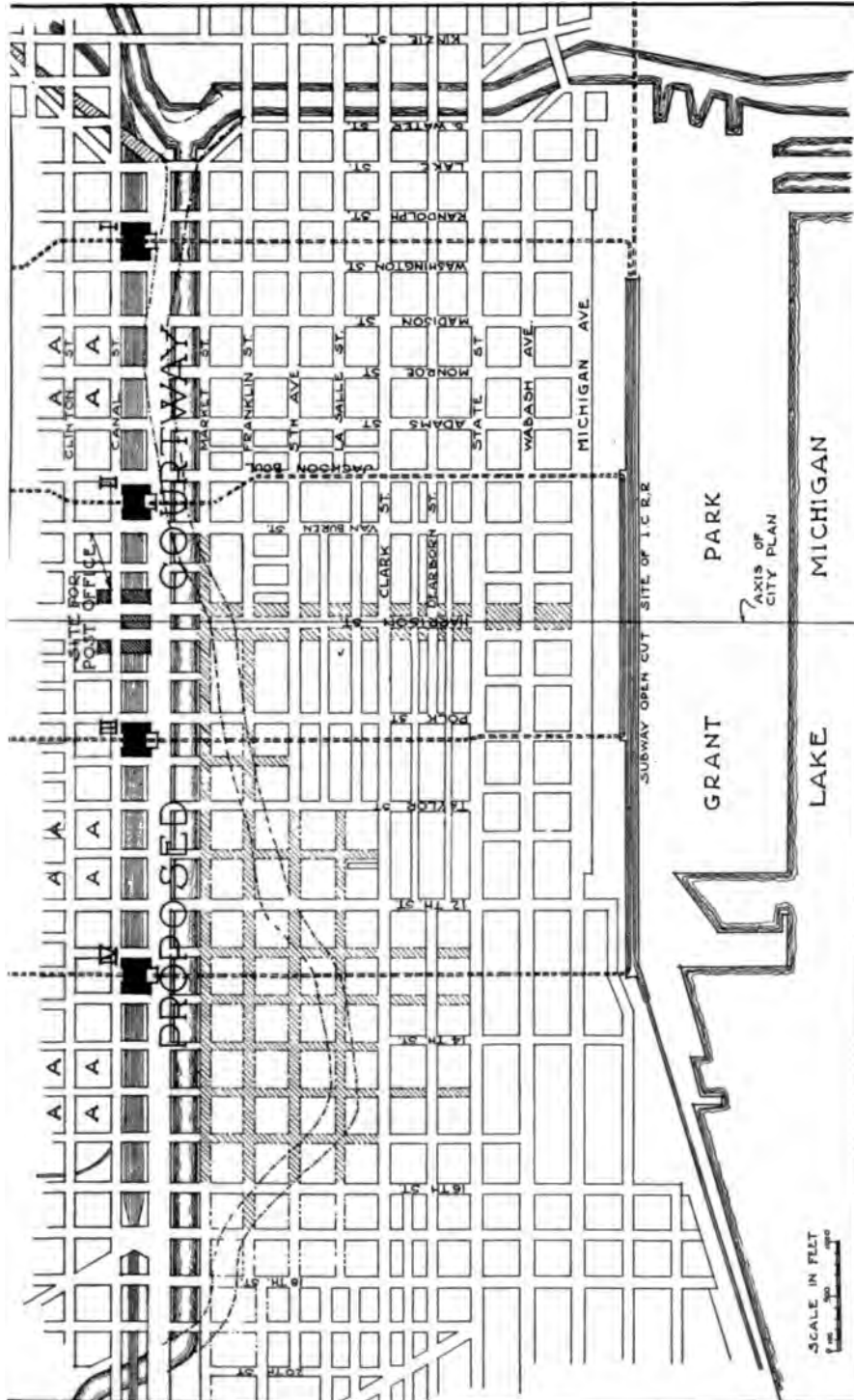


Plate 22.

KEY:  
 ——— Shore line of present channel Chicago river (south branch).  
 - - - - - East and west passenger subways.  
 ~~~~~ Streets widened or extended.

I II III IV Passenger stations along the main rail highway for all railways entering downtown district.

A Freight warehouses, etc., over subsurface freight yards.

## MAP OF DOWNTOWN AREA OF CHICAGO SHOWING MAIN RAIL HIGHWAY AND OTHER CHANGES PROPOSED BY MESSRS. GUENZEL AND DRUMMOND

This illustration shows the relation of the proposed courtway and main railroad stations to the downtown area. All east and west streets run through under the proposed elevated structure for railways. The spacious courtway would fulfill an absolutely necessary function in providing an adequate approach to the stations.

East and west passenger subways pass directly under each unit station, the location of the stations being determined by the minimum distance at which the subways should be spaced apart. The interval between unit stations also allows just enough length for sidings at each station for long distance trains.

The Harrison street roadway is similar to that suggested as a city axis in the Chicago Plan, and is created by extending past each other the existing east and west portions. This axis bisects one of the spaces between unit stations and would thus give opportunity for a monumental feature at this central point of interest. (See illustration, page 59.)

New streets are indicated which are merely the extension of those streets that do not now run through because of railroad obstruction: as many other streets could be extended as desired. The river is shown in the proposed new channel.

## THE RAILWAY TERMINAL PROBLEM OF CHICAGO

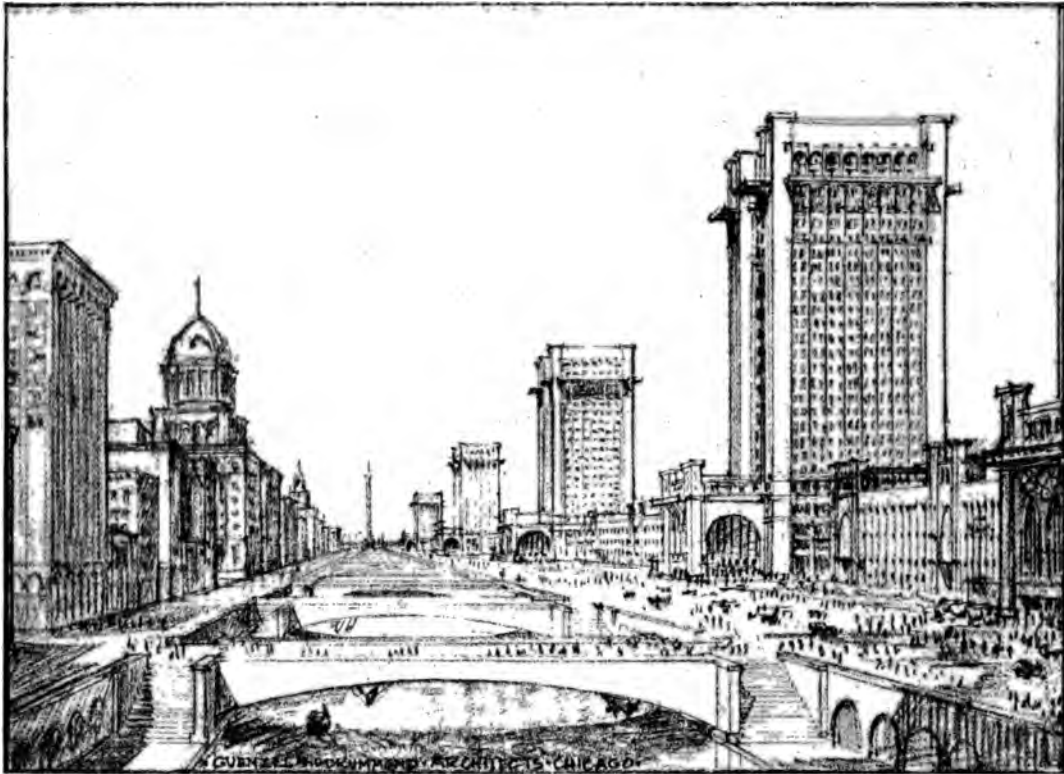


Plate 23.

### ROUGH SKETCH OF PROPOSED COURTWAY, LOOKING SOUTH FROM LAKE STREET AND THE CHICAGO RIVER—PROPOSAL OF MESSRS. GUENZEL AND DRUMMOND

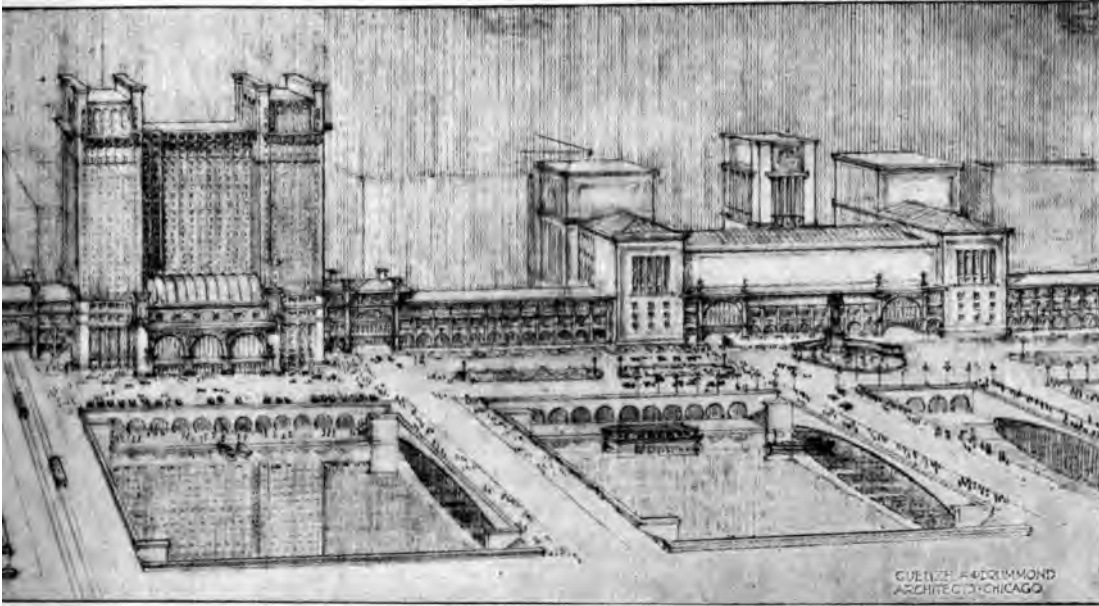
The drawing shows the straightened river with low-level freight wharfs on either bank, the broad boulevard at the right covering the freight-way, and, beyond the boulevard, the double-deck railway structure stretching along Canal street. The waiting rooms of the railway stations project into the courtway and interrupt the vista; each one will thus command an interesting view from within and becomes a prominent feature of the courtway's architecture. The tall office buildings above the stations, all of one type, help to emphasize the significant rôle which these great stations will play in the life of Chicago.

ing of the river being part of the general plan. At intervals of approximately one-half mile along the structure four new main passenger stations are to be provided. It is proposed that each station be monumental in design, strikingly effective in scale and amply provided with office space.

The two levels above ground will be devoted to the long distance train service, while the subway will be devoted to local or suburban train service. The *second* or *uppermost level* of the elevated structure, about twenty-eight feet above the floor of the main waiting room, will accommodate the *incoming* long distance train service of all railways, the *first* level above ground accommodating the outgoing long distance service.

Long Distance  
Service

## PROPOSAL OF GUENZEL AND DRUMMOND



24.

### ROUGH SKETCH OF A PART OF THE PROPOSED COURTWAY, LOOKING WEST ACROSS THE RIVER NEAR HARRISON STREET—PROPOSAL OF MESSRS. GUENZEL AND DRUMMOND

The double-deck elevated structure of the railroad highway along Canal street is seen crossing over east and west thoroughfares. One of the great "unit" stations with office building above the trackways is shown to the left.

To the right is roughly suggested a new post-office building to be located at the crossing of the elevated structure and the proposed east and west axial boulevard at Harrison street.

(EDITOR'S NOTE: Two city blocks would, in reality, intervene between the proposed post-office at Harrison street and the unit station here shown, but only one block is indicated in the rough sketch, which is submitted simply to suggest the architectural effect along the courtway.)

Forty-eight long distance trains (arriving and departing) is approximately the present number for the busiest hour for all the railways of Chicago. Estimating a total capacity of one hundred and forty-four long distance trains per hour for the four proposed unit stations at the busiest hour, there would be required 24 sidings for outgoing trains, allowing a twenty-minute stop to each train, and 16 sidings for incoming trains, allowing a fifteen-minute stop for each train. Shorter intervals would be possible, as some authorities have indicated, but to make sure of having enough space, six standing tracks for outgoing trains and four for incoming will be provided at each unit station. It would appear that four times the present number of trains per hour could be handled easily from the several units. But this great number (approximately 200 per hour) would presuppose a monster city of many millions population in excess of the City's probable growth, since much of the long

## THE RAILWAY TERMINAL PROBLEM OF CHICAGO

distance traffic would, in time, be kept out of the downtown area altogether.

### The Suburban Service

Directly under the double-deck elevated railway structure, which we propose to locate along Canal street and below street level, are located the trackways for local or suburban trains, which will stop at all four unit stations.

By joint through-route operation of the local service of all railroads, other than that of the Illinois Central, over such routes as would provide the most efficient service, the present number of approximately eighty trains per hour at the rush hour could be drawn through on four continuous tracks at an interval of about three minutes each; and since trains can be run at a more frequent interval, it will be seen that these tracks should suffice for the demands of traffic for a considerable time to come. This plan would leave a great deal of track space to be used, if desired, for temporary daily standing room, since we provide for eight continuous tracks so spaced as to allow for landing platforms at each station.

Long distance trains do not, as a rule, serve for the carriage of suburban patrons, and this traffic may be largely a one-sided affair. In Chicago such traffic enters mostly from the south.

The regular suburban traffic is, on the other hand, a pretty well balanced affair. The heavy morning service is nearly all *incoming*, while the evening service is nearly all *outgoing*. The "extra" suburban trains used during the morning rush hours should have standing space during the day convenient for the return trip in the evening. With through-routing, the proposed coach yards indicated for long distance trains would afford standing space during the light hours of suburban traffic for the "extra" suburban trains.

The three diagrams showing proposed systems of long distance and suburban trackways (Insert II) cover the same territory and indicate graphically the value of through-routing, showing how few crossings, switches, etc., would be necessary, as against the vast number now encountered in the same area.

With eight parallel tracks in the subway running through the four stations, three hundred and twenty local trains per hour could be run through and out, stopping at all stations on a schedule interval of a minute and a half. Moreover, an equal number of trains per hour could be landed downtown by the west, north, and south side rapid transit lines. With a possible total capacity of six hundred and forty trains per hour, it would appear that the proposed suburban system would be adequate to all needs of the future.

The proposed arrangement of unit stations, among other ad-

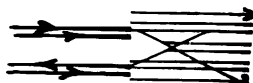


## **The Suburban Service**

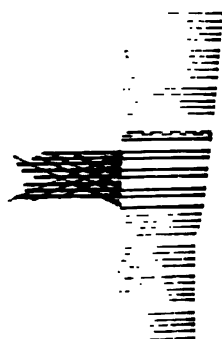
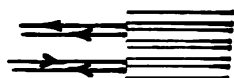
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Plate 26.

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**The Suburban  
Service**

## PROPOSAL OF GUENZEL AND DRUMMOND

vantages, permits of determining at once upon a definite system of passenger and freight subways for the downtown area, and prescribing with certainty necessary limitations as to length and depth of tunnels, etc., desirable locations for portals, and an economical and practical plan of routings. Thus a system that shall include ample provision for the future will be laid out and put gradually into operation. The four unit stations would be located at points where the proposed east and west subways would cross, thus affording universal communication.

Subways for  
Passengers

If a comprehensive plan for local transit is to be devised, then a system for local freight delivery throughout the city should be made a part of that plan. By establishing freight depots at suitable points along all railway lines, equipped with loading devices, etc., and with special trucks for delivery and collection, a great saving in the handling of freight would be effected. A truck for this purpose (which might be called a "Universal Truck") can be so designed as to be adaptable for use in the proposed central subway freight system, in factories and warehouses, in the unloading of boats and for the movement of freight over street car lines or street pavements. With adaptability for all these purposes, it is obvious that a truck, which can go anywhere, could be delivered direct from freight car to consignee without reloading, or vice versa. Special cars of the subway and elevated passenger service, designed to take these trucks in and out at the side, can be so equipped that while a train is stopping at a station or platform the trucks can be received or discharged in the time usually occupied in making stops for passengers.

The Proposed  
Freight System

Freight  
Collection and  
Delivery

This novel adjunct to the freight system would bring about many improvements over the present inefficient methods of handling freight by teams, motor trucks, etc. While lowering the big fixed charge for freight collection and delivery the system of universal trucks would afford a much more rapid, flexible and extensive system, reaching even to the outlying districts of the city.

Since a large part of the area between the river and Canal street is now occupied by railways at a level below the streets, and since, with our scheme, this space will be gradually widened and lengthened, and since our proposed system of trackways is accessible to all entrant freight lines and, moreover, permits of ample street connection to all parts of the city and to the water front,—it is evident, because of all these advantages, that no better location is available for a downtown freight yard, or depot, than the proposed site along Canal street. Such a location is central and would be at the head of

Site of Proposed  
Downtown  
Freight Depot

## THE RAILWAY TERMINAL PROBLEM OF CHICAGO

the proposed inner harbor along the Drainage Canal and in immediate connection with both proposed outer harbors.

### Sub-Depots for Freight

Six business sub-centers are shown in other parts of the city on plate 31, page 70. At these points, besides team tracks, warehouses, etc., for freight purposes, there will be located passenger stations, coach yards and other railway utilities. The wedge-shaped sites, lying between the tracks converging to the sub-depots, will be most suitable and convenient for the railroad buildings, etc. Because of the facilities for shipping and receiving freight the areas adjacent to the sub-depots should prove highly desirable for commercial use and also should prove desirable for business sub-centers. The employment of a series of local depots from which and to which freight could be drawn in regular train service from a central clearing yard (as at Clearing, Illinois), appears imperative, as it affords a basis for primary division and circulation of inbound consignments, and establishes a unit area within which a subordinate circulation can eventually be maintained. Moreover, by means of this system freight can be deflected from the congestion at the city's center. These five local depots together with the central depot would establish a complete inner circuit.

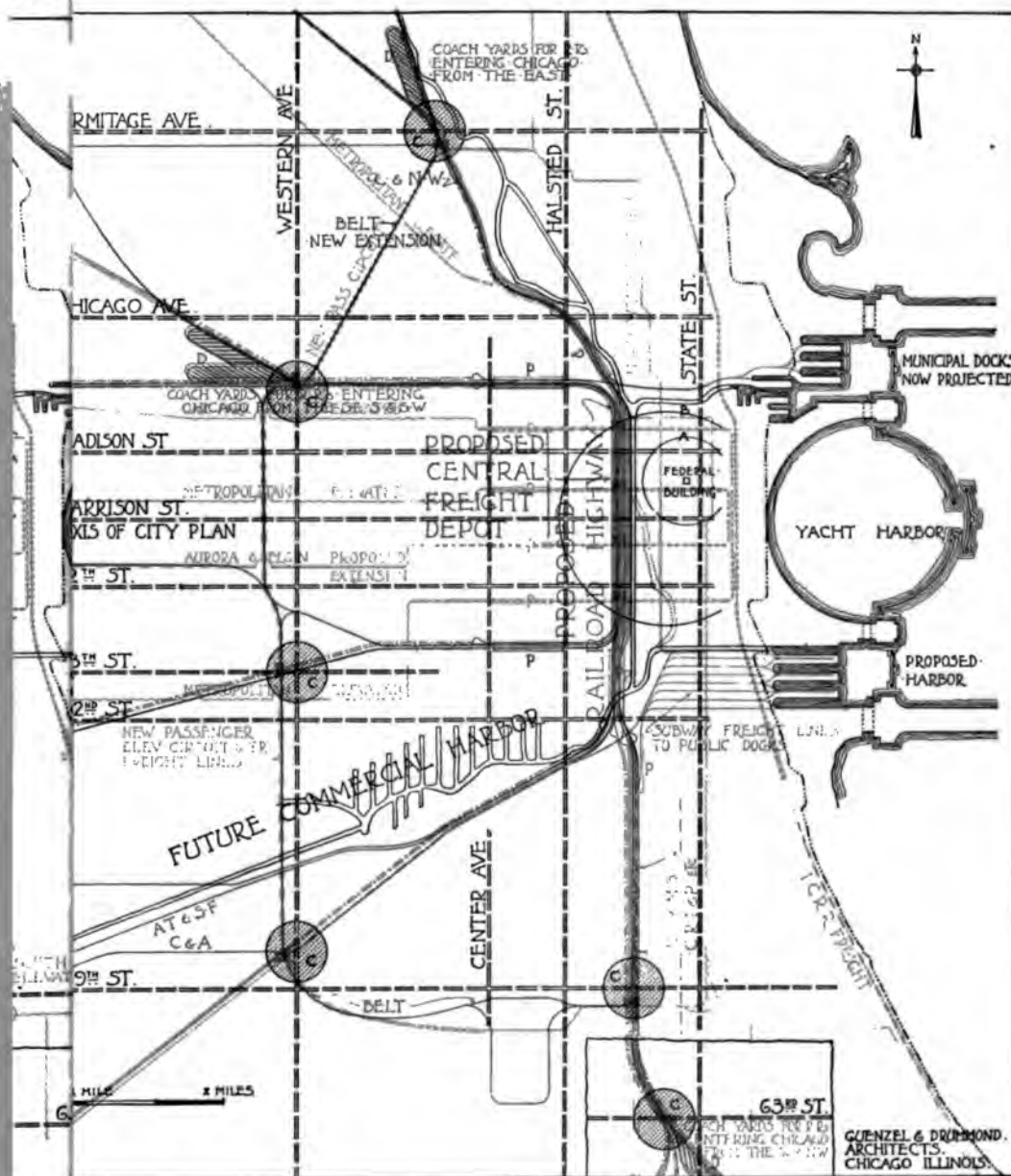
### Operation of Universal Truck System

The central or downtown freight depot could receive trains, made up in proper station order, from the outlying common freight depot of Clearing. These trains would proceed at once to the proper stations where the freight would be unloaded upon the "Universal" trucks, wheeled directly to the doors of the cars. The trucks in turn would be sent up into warehouses above the depots, or sent through the downtown tunnel circuits, directly to the consignee. The freight cars once emptied could then be reloaded and drawn out full, the loading also being done by universal trucks returning from shippers and warehouses.

This system of freight handling by universal trucks appears entirely feasible through the employment of gravity for receiving or discharging the trucks at destination, and their operation on unit circuits by means of selective cable transmission. Control over despatch could be maintained between prescribed points on the several circuits and the central depot by the use of electric apparatus which would show the exact location of each truck at all times, and keep tab on the delivery and receipt of all trucks.

It is planned that freight trains enter at either end of the depot at a level below the street. These trains would enter full and leave full, and the whole work of loading, unloading and delivery right to the floors of all business houses, could be done out of sight, in a rapid,

DBL



**COLOR SCHEME:**

- RED—Long distance passenger service. (For details, see Plate 27.)
- ORANGE—Suburban and local passenger service. (For details, see Plate 28.)
- GREEN—Freight service. (For details, see Plate 29.)

**PLAN FOR REORGANIZING CHICAGO'S TRANSPORTATION FACILITIES—PROPOSAL OF MESSRS. GUENZEL AND DRUMMOND**

This plan, combining plates 27, 28 and 29, shows the correlation of the separate systems of long distance, suburban passenger, and the relative location of freight and passenger facilities.

NOTE: The subway circuits for the collection and delivery of downtown freight by a special trucking system (see Plate 29) are omitted from this drawing for the sake of clearness, but are a part of the proposal submitted by Messrs. Guenzel and Drummond.]

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## THE RAILWAY TERMINAL PROBLEM OF CHICAGO

**Fast Freight  
Despatch**

outgoing fast freight could be despatched from our downtown depot. Only by virtue of a single receiving station, such as we propose, can the great work of receiving, loading and despatching fast freight be efficiently organized. All consignments received by day could be prepared for prompt despatch the evening of the same day.

**Advantages**

The plan which we propose, besides providing for general improvements in transportation which would benefit the whole city, would be of great value to downtown Chicago on six distinct counts, namely:

**Reduction of  
Space Occupied  
by Railways**

*First.* The plan which we propose makes possible a gradual installation of a system of main railway stations down town, each one a unit in itself but still a part of a series, or chain, of stations. The needs of each group of railroads will be cared for as the city grows larger and traffic volume increases by adding new unit stations to the chain. The entire proposed system, for both freight and passenger service, will be accommodated above ground on an area of about 25 city blocks, as against 35 city blocks now in use simply for passenger trackways and stations—or 80 city blocks if the present freight yards be added. This calculation does not take into account the stations or trackways of the Illinois Central group of railways.

**Passenger  
Subways**

*Second.* Our plan makes possible an immediate solution of the downtown rapid transit problem by providing as a substitute for the elevated railway loop system a series of east and west through-route subways for the use of all west side elevated lines. This subway system, with the proposed extension of the Illinois Central local passenger service through the north side of the city in subways, fixes definitely the boundaries and limits for that intensive use of facilities which alone can sustain the expense of subway construction and operation on a low fare basis. The use of subways as proposed in our plan gives an absolutely universal system of carriage by transfer.

**A Post Office  
Near Railways**

*Third.* Our plan provides a convenient and central site for the downtown post office, which we propose to develop as an integral feature of the proposed central railroad structure, so making possible a close working arrangement with mail train service by means of tube or belt carriers directly to and from trains.

**New Streets  
and More  
Space Promised**

*Fourth.* Our plan makes possible the unlimited extension of the downtown business area to the south and west, adding an actual area north of 16th Street and east of Canal street of about fifty-five city blocks, at the same time extending all streets through the area now occupied by railroads to the areas beyond.

## PROPOSAL OF GUENZEL AND DRUMMOND

*Fifth.* Our plan creates a spacious courtway extending north and south between Market street and the proposed railway highway, this being a distinctive city-beautiful feature, which provides the space absolutely necessary as an approach to the main stations. This courtway is made possible by elements of our design, as follows: (1) the straightening of the river in a line due south from Lake street; (2) the building of the great elevated railroad structure along the east side of Canal street; and (3) the location in part between these features and below street level of our downtown common freight depot, over which is to be built the broad street of the courtway.

A Courtway  
Approach to  
Passenger  
Stations

*Sixth.* Our plan provides a location for a common freight depot below street level for the handling of downtown freight. In this common freight depot all central inbound and outbound freight can be handled under one management and at a location most convenient to the probable warehouse area—this improvement will be effected gradually without disturbing the present system of handling freight to any serious degree.

A "Union"  
Freight Depot  
Downtown

Of these six great objectives the most pertinent at this time is, of course, that pertaining to the location of the passenger and freight terminals. City planning is so much a public affair, and good railroad service so fundamentally a public necessity, that only by the broadest consideration of present and future needs can the highest utilization of the railway properties be brought about.

No city can contemplate municipal ownership of railroads, but every city should seek to obtain quick, unobstructed and cheap travel on all transportation lines. In this way all surrounding regions are brought nearer to the city, all business is protected against inordinate or discriminative transportation charges, and the city at large is benefited in proportion. Proximity to rail facilities has a direct bearing on property values, for where railway service is good there will always be a good demand for near-by property.

Advantages of  
Joint Usage

Chicago is unique, in that she is primarily a railway city. Her rise to first importance is probably due solely to the fact that the freight movement of the major portion of the Middle West has found this point the most convenient for freight interchange. The railroad problem is Chicago's great problem. The many roads that center here need great space in which to operate. They occupy here a sphere of activity greater in proportion to population than obtains in any other city and, therefore, the scientific use of Chicago's railroad facilities is of first importance to every inhabitant. If the city and the railroads do not co-operate to bring about the

Chicago a  
Railway City

## THE RAILWAY TERMINAL PROBLEM OF CHICAGO

highest use of these facilities, the further development and maintenance of Chicago's great commercial advantages and its opportunities for good living, good business, or for civic improvement cannot be realized. Railroad interests have injuriously dominated cities and even states. Chicago should be free, a partner to the railroads, and should seek rather to direct and encourage railroad improvements than to follow a policy of obstruction. She has grown by virtue of such service as the railroads have been able to offer. She has demanded nothing. She has given freely. Further exclusive advantages should not be contemplated, because that is a policy barren of further benefit, either to the city or to the railroads.

Put the matter the other way. Suppose that, instead of favoring the separate maintenance of freight depots, the city should co-operate with the railroads in bringing about a common central freight depot, such as our plan provides. Only by some such scheme will it be possible to utilize the modern labor and time-saving appliances which mechanical engineering has to offer in connecting business houses and distributing points. As a result, the streets would be relieved, the unsightliness and expense of maintaining freight yards and of teaming would be greatly diminished. The saving would be effected because of the greater efficiency of mechanical methods and because of the unification of freight depots under one management rather than the duplication of these depots with their dubious advantages of exclusive use. As far as central freighting alone is concerned, expansion could then take place freely in all directions, there being no reason for any railroad further to maintain private depots and freight tracks.

Method of  
Financing  
Proposed  
Improvements

We have endeavored to focus public attention upon important community interests in regard to the railroad problem. The city may not have the right to impose conditions upon the railroads, but the city is not without resources, and, by offering certain advantages to the railroads, such as the straightening of the river or the granting of the use of public space, or furnishing access to public docks, Chicago could bring about every one of the improvements which are vital to her civic advancement and for which she could afford to pay dearly. Moreover, it is possible that the railroads may, by encouragement through public opinion, be brought to favor and carry out this or some other economical, practical and permanent plan of co-operation in order to secure those advantages which, under such a plan, would come to them by virtue of joint sharing, rather than competitive grabbing. The river could be straightened

## PROPOSAL OF GUENZEL AND DRUMMOND

at no expense to the city or to the railroads, because over a square block of land, worth five millions of dollars, would be saved by shortening the course, and the value of this block added to the increase in value of the property which the railroads now hold, but would not need in the future (were the plan adopted), amounts to more than the cost of changing the river channel.

Our present tendencies are bound to lead us ultimately into intolerable difficulties. The new Northwestern Station, for instance, one of the best appointed railroad stations now in use anywhere, employs the old stub-end system for trackways. Witness the way in which the stub-end station works. Incoming trains pull in over tracks used by the outgoing trains. Consequently, just as soon as a certain point in capacity is reached, an amount of obstruction occurs that absolutely prevents an increase in the number of trains the station can care for. What is the result? This station is now being used nearly to its capacity, and, consequently, if it is to keep up with the increasing demands of travel, will either have to employ a different system of train movement or must be enlarged. If the new Northwestern Station can now accommodate say forty trains per hour, it is reasonable to suppose that when passenger traffic shall have doubled, this station will require nearly double the area it now occupies.

The Lesson  
the Stub-end  
Terminal

Such a condition obtains with all roads. The railroads of Chicago, taken together (excepting the Illinois Central Railroad) now occupy for passenger terminals in the area bounded by State street, Clinton street, 19th Street and Lake street—the heart of the city—a space equal to approximately thirty-five blocks. At this rate, if we, as a city, are to allow the railroads all the space they may ask for, then when traffic demands are doubled, we shall be forced to give up twice as much space as is now used in this most valuable area merely for terminal stations.

If the tendency of railroads to occupy more and more space continues much longer, the center of the city must become as in the case of each station, even more strangled for space than at present. Our present strangled condition is the outcome of the city's policy of endeavoring to satisfy the private interests of each particular group of railroads, and of the policy followed by each of these groups in trying to get the biggest exclusive share of the business of this community. Whether the acquiescence of the community in this policy is voluntary or unconscious is immaterial.

Reason for  
Communit  
Foresight

The fact is, that at no time during the growth of the city have advantages solely for the good of the community been either sought



## THE RAILWAY TERMINAL PROBLEM OF CHICAGO

by the city or offered by the railroads. It is obvious that the railroads within the city will never have more work to do than the sum total which is created by the city's demand. They cannot and do not make the traffic—they merely satisfy it. We know that it would be to our immense economic advantage for all time, could we secure the highest efficiency out of the railroads, without at the same time being compelled to crowd the downtown area out into the lake to give room for the terminals, or to crowd the terminals periodically out farther from the center of the city to get space in which to operate. But neither course is necessary if the city co-operates with all the railroads in some such plan as we have submitted.

We have preferred to urge at length the public need, rather than to draw attention to details of our plan, which, to receive favorable consideration, must be advanced on the ground of broad public interest.

Main Railroad  
Stations Should  
be at the Center  
of the City

Touching the location of main railway stations, we submit that they should be located approximately in the center of the future downtown business area, not, as now, on the edge, and that ample space should be made available for the city to grow around these points of entrance to and exit from the city. The areas near the central stations should be the most valuable, the most sought after for business purposes when electrification is accomplished. If any scheme shall be advocated for the progressive development of Chicago's commercial advantages electrification should be a first consideration.

Since the tremendous cost of electrification compels great economy of track space and train movement, a readjustment of railway routes, terminals and equipment will be necessary and this would be in line with our proposal should the city require electrification.

Elimination of  
Railway  
Crossings, etc.

A plan for the improvement of Chicago's rail facilities which leaves out the indispensable element of universal rapid train despatch would be like a proposal to build a modern high speed locomotive with a single pair of driving wheels. Rapid train despatch from the present tangle of trackways is impossible, and so, in our plan, after bringing all lines to the center, it became imperative to create separate channels for the three kinds of train movement so that there would be no crossings at the intensively used central highway.

This triple division of train movement makes possible the entire elimination of switches at the approaches to the "highway" as well as an orderly separation in the stations of outgoing from incoming passengers, while the suburban "commuters" are further

## PROPOSAL OF GUENZEL AND DRUMMOND

separated from the long distance travelers. Thus the work of the station is organized and confusion is prevented at the daily "rush hour," which tests a station's capacity.

A three-level scheme makes possible a triple usage of valuable area. This high usage at the extremely valuable center is made possible because of the fact that the space required for a certain number of sidings for long distance trains would probably always be sufficient at the subway level for a contemporaneous through-routed series of local trackways.

The three-level scheme is capable of being amplified by merely placing additional units of construction at one side, and thus can be enlarged to any desired capacity in the future without disturbing constant usage.

The employment of through-routing with unit "way" stations would prick the present-day bubble of "exclusive terminal advantages." When this truth is once realized the railroads will be arranged in groups based on the direction from which the included roads enter the city. Only in this way can all crossings of tracks be eliminated, since each such group would then be composed of roads having parallel tracks to its downtown station. The traffic of such groups could be easily regulated and an equal volume maintained by reapportionment of roads to stations. While two unit stations would serve the present requirements, we provide four, as a probable ultimate need, though more could be provided should the exigencies of the future so require.

Grouping of  
Railroads

With this plan for the location of main stations and subway connections, each of the proposed groups of railroads could from time to time, as required, build new stations, and the Union Station Association could, by building the first unit where we propose, make this progressive development possible today. This is a salient feature, which, if taken advantage of, would give the key to the situation to the city. What more desirable aim for all interests concerned could be possible at this juncture?

Expediency  
of the Plan

The Northwestern Railroad could be eliminated from consideration at present if it refuses to co-operate, and the Union Station Association could build this unit and actually operate it as a double stub-end station; or, better yet, they might be prevailed upon to operate on the basis of through-routing their combined service, in view of the fact that the several roads forming the group now enter from the three main ways, which would have to be used later for all railroads. In that way they could build a unit system and operate their trains at the proposed subway level and with

# THE RAILWAY TERMINAL PROBLEM OF CHICAGO

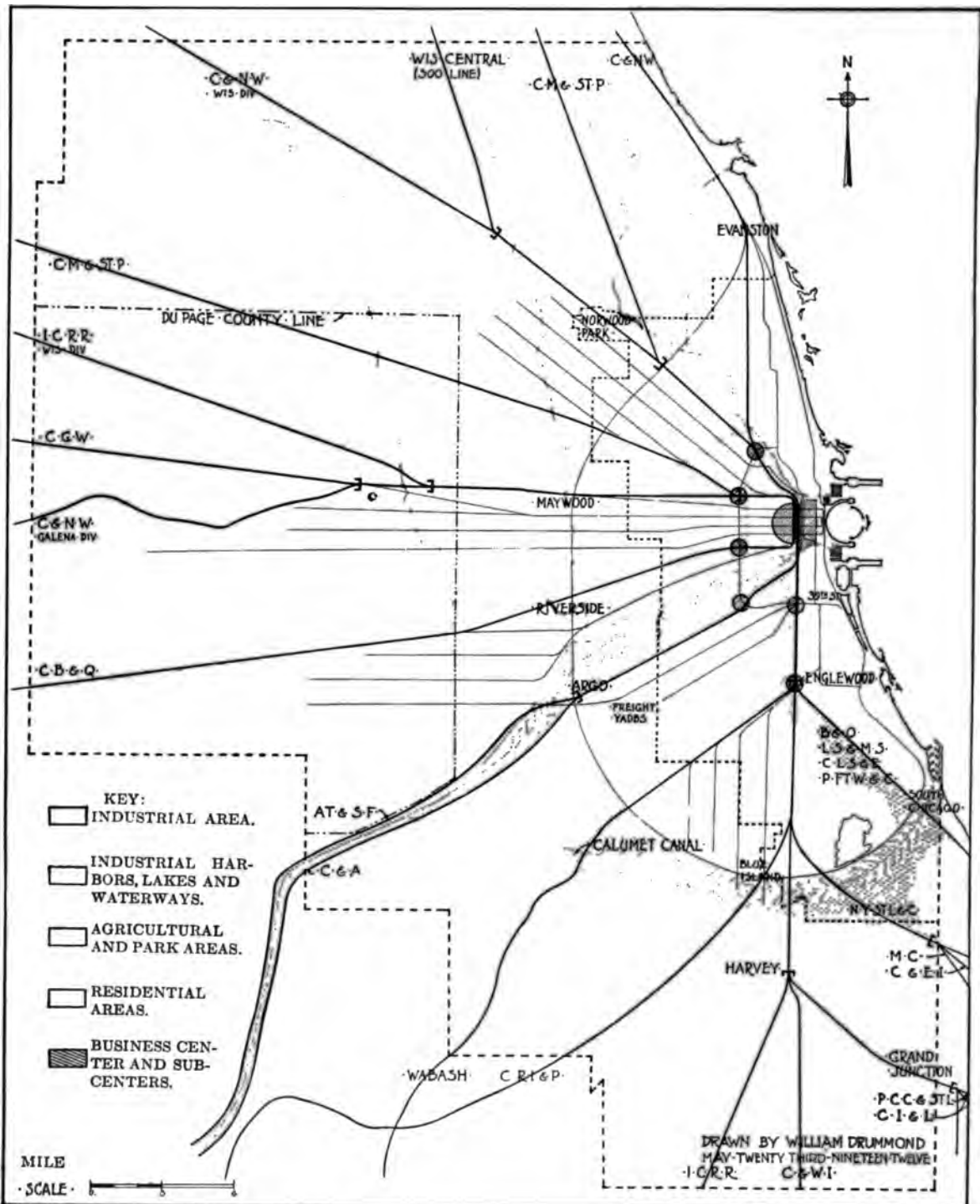


Plate 31.

— Rapid Transit System.  
— Railway Through-routing System.  
— Railway Junctions.

----- Present City Limits.  
----- Proposed City Limits.

## PLAN FOR THE FUTURE DEVELOPMENT OF THE CITY OF CHICAGO

By MESSRS. GUENZEL AND DRUMMOND, ARCHITECTS

## PROPOSAL OF GUENZEL AND DRUMMOND

steam traction, merely providing for the elevated structure as a future contingency. Thus, the situation would be saved until such a time as public opinion could bring about laws or conditions which the several railroads could not afford to overlook or refuse to comply with.

For the further pursuit of a plan for progressive development it should be possible for the city, acting in conjunction with the Union Station Association, to utilize in part the site of the old station with other possible extensions, for the temporary location of their freight terminal requirements, it being understood that this area would later be extended and developed southward for a great central freight depot.

Through-routing of trains allows them to come in through the city, deposit patrons at various points at the center, and pick up a new load at the same time. This method is quite different from that employed by railroads at present, in that all traffic is now brought to the center and dumped off at one certain point, and thus patrons who desire to pass farther on have to use other means, and the train which might be of considerable further use is drawn out of its station by the way it entered, to a standing space. Here is wasted motion and obstructive usage of tracks, switches, etc.

An Eventual  
Universal  
Local Service

If the several railroads now operating from the Union Station could be induced to take advantage of through-routing by "trading off" one trip against another, they would be making money by the scheme, besides conferring lasting benefits to the city in many ways. This would be a simple way of proving the case and of making a beginning.

With through-routing established and all lines electrified, it is easy to see that one universal system of local passenger service will become possible and probable, since unified management with its economies and advantages will then be sought as a common boon by the railroads, inasmuch as they make claim that the suburban department does not pay.

This reorganization, with the proper number of tracks, stations and appointments, would substitute in place of the present order a single system of a highly efficient character with scientific through-routing its main feature.

For many years the writer has followed this problem in its broad relation to city planning. It has been a matter of surprise to find how few, indeed, realize how significant to the future of the city is the location of the highly efficient railroad and its appointments, and of the many advantages to be obtained by through-

A Comprehensive  
Chicago Plan

## THE RAILWAY TERMINAL PROBLEM OF CHICAGO

routing of all rail traffic. Many outlying points that could, by arbitrary concentration of activities, be brought to high intensive use as business centers are possible if we do but analyze our commercial activities and dispose points of distribution and collection with some relation to our vast city area, instead of gradually concentrating all business into the downtown area. If, for instance, we should determine on a point such as Clybourn Junction as a location for a new railroad coach yard, passenger station and local freight depot, and with these should locate there our sub-stations for police, fire and postal use, municipal markets, local street car centers, interurban car centers, educational institutions and other public features—would not the neighborhood become a peculiarly advantageous location for private enterprise? Would not great local business activity spring up around such points, which could be distributed throughout the city, and tend to counteract, because of their advantage of location and convenience to transportation (which is the primary factor), the present tendency to centralize all these activities downtown?

To carry the thought further, the near-by country space should hold many economic and social advantages for factory, as well as for residence purposes, instead of so much of it being held vacant and unused.

The Radial  
Growth of Cities

Think of the distressing living conditions that are being fostered and spread in wide and featureless areas of the city. You must know that the interurban and main railroad lines tend to draw the population out. Why not simply organize this pronounced tendency into a method whereby certain country spaces could be built up and certain others be left open, the latter penetrating right into the city for park and farming land, allowing space for a recreational antidote to the stifling artificiality of our present city life, of our work places and living conditions? That was our thought, our starting point in fact. Later the traffic diagrams prepared by the City of Berlin were published and certain theories, evidently deduced from a study of these, were advanced by Richard Peterson and other engineers of Berlin. They make much of this theory which is now widely recognized as a basic law of city planning, an open city in contradistinction to the old idea of a solid, round city.

Now, as a broad public policy, should we not first ask that areas be created fit for people to live in without being rendered uncomfortable and indecent for our immediate neighborhood? Should we not demand that the railways be so located as to make it possible to draw traffic in and out of the city without scattering their terminals indiscriminately all over its precious area, because we know that

## PROPOSAL OF GUENZEL AND DRUMMOND

the land lying nearest the city must always be the most valued? The use of central land should always be arranged so that it will develop the highest benefit to the whole of the community, both now and for ages to come.

The city is a fixed affair, and while the railroads occupy certain space, still that occupation presents no insurmountable obstacle to a relocation of routings or even a movement of trackways, should it be evident that greater mutual advantage can be made possible thereby both to the community and to the roads. A scheme for main and secondary lines of traffic can be as easily determined on in a preliminary study at the present day as it could five hundred years from now. If such a scheme is adopted now, those secondary lines which are seen to be obstructive or disadvantageous can be merged or relocated at such times as would be opportune, and city development would thus anticipate and aid the movement, instead of growing fast to a very bad condition.

The study herewith shown (see page 70) presents a logical base on which a highly desirable control of the future growth of population can be maintained in the area of the future city, as comprehended by the union of Cook and Dupage counties. It would have to be followed as a great public measure. It is possible for the city to maintain control over locations of rapid transit lines for the public good. The red lines shown in the yellow spaces in the illustration (page 70) indicate the rapid transit railways, projected out at a unit space apart, and the yellow spaces indicate the areas which would, by virtue of these lines, be made available for habitation areas, these being extensions of present thickly settled areas.

The Future  
Metropolis

Inasmuch as the places of abode for city people must be convenient to transportation lines, it follows that the growth of population must follow along these lines; and it could then become possible to permanently maintain the intervening spaces not provided with transportation as park and recreational space—this at cost of foresight only, and all such park areas would be immediately accessible to the major part of the people without their having to use transportation lines and go long distances. By following this policy a certainty of good home environment is created for all the people.

Reservation  
Park Areas

In the present distressing order of events it happens that after a certain density of population is reached a decline sets in in values of city property. This decline, at least in great part, is undeniably caused by the lack of desirable living environment, due to too much crowding and to the lack of easily accessible permanently located park and recreational space.

## THE RAILWAY TERMINAL PROBLEM OF CHICAGO

Therefore, if property can be made to maintain good values by providing for only a certain fixed proportion of the future area of the city to be built upon, the balance of the area to be made into that open space which can be proved to be absolutely necessary for the good maintenance of the portion to be built upon, then the total value would be just the same to the city at large as if the whole area were built upon, and moreover, the city in all its parts would be a far better place to live in, and no slum areas could develop.

Our present park system is not so disposed as to be broadly accessible, and no defined method is available by which a necessary automatic extension is possible.

An Inner  
Commercial  
Harbor

The report made to the Chicago Harbor Commission by Professor J. Paul Goode four years ago, shows the commercial advantages of Chicago's location, and indicates the possibilities inherent in the development of the drainage canal for a great factory area in connection with an inner commercial harbor, such as are being developed in many of the great commercial cities of Europe.

This great harbor scheme is perfectly feasible, since the state owns the water front along the canal, and when this is once made accessible for leasehold and public dock space, it cannot fail to prove a big factor in our future development.

Plate 29 (Insert III, opposite page 62) shows the convenient location, as to manufacturing areas, of all the waterways, both those that exist and those that have been proposed, and indicates graphically the direct access to our railway system which would be made possible were a new Lake Harbor to be built between 16th and 22nd streets and also a new inlet between this and the river, both of which might be greatly needed, should any such development occur as that outlined by Professor Goode.

The city plan (page 70) also indicates how, if it were only possible to divide the growth of the city into definite radial arms, it would become feasible to base our municipal, administrative and elective organization on these larger and more comprehensive divisions, rather than on the indefinite and illogical ward basis. There could then be no shirking of civic responsibility by any class who might segregate themselves, as they do now, in suburbs, and, therefore, there would be less chance than at present for extremes of living conditions to develop within the area of the city's influence.

The Dominant  
West Side

This plan provides an adequate and dignified connection between the great west side and the downtown area—in fact, by wiping out artificial barriers, encourages the almost certain gravitation of the great business center in that direction, an objective which seems

## PROPOSAL OF GUENZEL AND DRUMMOND

commendable and reasonable, since the west side is and must always be the largest and most populous section of Chicago. Another west side advantage is that the present fag ends of Milwaukee avenue stretching to the northwest and Archer avenue to the southwest would have appropriate "courtway" terminals. We deplore the neglect which has in the past been the treatment accorded to these great arteries leading to large and significantly disposed sections of the city.

The reception and disposal of such vast numbers of passengers as would here occur, even if largely by transfer within the stations, would give tremendous value and quick accessibility to all sites on and adjacent to this courtway, so that it would seem probable that the shops, hotels, theatres and places of recreation and instruction of the future would here be advantageously located.

In general, this plan satisfies the requirements of all the railroads to a greater degree than any other proposed plan; yet it operates to the benefit of no particular group, but first to the benefit of the whole city of Chicago, and after that to the railroads and shipping interests that centralize here.

The big difficulty of getting the trains over the river, in order that all railways may meet in a centralized through-routing scheme, will make it imperative to use fixed bridges over waterways, because the delay and confusion resulting from interrupted train service would become intolerable. If the city and the railroads can profit mutually by effecting a great co-operation on a basis of through-routing and joint railroad use, the price the city at large would pay would be only the added cost of lighterage and the deflection to the new Calumet Canal of such lake boat through movement as might possibly be developed. On the other hand, the type of inland river boat that will probably be used exclusively, would pass under all our fixed bridges, and could, therefore, discharge and collect cargo anywhere.

Benefits in  
Co-operation for  
Both City and  
Railways

Never before has such a situation confronted a city so great, for, in spite of its youth, its rapid, hit-or-miss growth, and consequent general need of comprehensive improvements it still has the space and all the favorable circumstances that other cities lack.

Never before has such an opportunity been open to the modern architect or engineer. On the rail highway which we propose can be provided a clear right-of-way for trans-continental trains from all directions, if desired, and trains can enter or leave the city, stopping at any particular station or any series of stations. Here local trains from every quarter of the city can shuttle with high speed



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right through the center and out without crossing a single line, yet touch all other lines and pass through all main stations. Here, in any one of five stations, a traveler can arrive from a distant city, and taking scarcely a score of steps can board another train on another road to another distant point, or he can take a local train to any point in the city, or its environs, or step out under cover and into a street car that will take him anywhere in the city.

Inasmuch as some of the railroads are still on street level and must be elevated to comply with the law, and inasmuch as all new terminals will in some manner require special ordinances for closing of streets, or for structures over them, and inasmuch as the city must soon compel electrification, as a measure of self-defense, it would seem possible that the City of Chicago, when roused to its opportunities, could bring about the settlement of its railroad problem in a most comprehensive manner: but it can be done only by all citizens joining in a determined and continued endeavor. No group of railroads can hope, without co-operation with all the others and with the City of Chicago, to develop their own most desired economies, profits and advantages, and therefore it seems possible to get these parties in interest to agree to and co-operate in the working out of a comprehensive plan for the city's further commercial development.



## VI. THE NEED OF RAILROAD CO-OPERATION

ADDRESS BEFORE THE CITY CLUB OF CHICAGO, JUNE 9, 1913, BY MR. FREDERIC  
A. DELANO, PRESIDENT OF THE WABASH RAILROAD COMPANY



WHILE I appear before you primarily in my capacity of a private citizen, I am, of course, a railroad man, with many friends in that vocation. I am not, therefore, in sympathy with any sort of abuse of railroad men; nor do I think it is called for or, in any sense, a necessary part of this discussion. A railroad official is the paid trustee of the owners of the property he represents, responsible to the Board of Directors for the conduct of its affairs; and by reason of the quasi-public character of the service rendered he is also responsible to public authority. This dual responsibility every railroad official keenly feels, and certainly none deny it. In approaching a problem of this kind, it is obviously the duty of railroad officials to look out for the interests they are employed to protect. At the same time they must realize they cannot safely nor for a long time ignore or violate public sentiment.

Railroad  
Officials Between  
Two Fires

Let us also consider what is the selfish duty of the Mayor, the Council, and the Chicago Plan Commission. Obviously, their duty is to protect the interests of the city as a whole. They should be just as cautious, just as jealous, just as keen to protect the rights and best interests of the city—past, present and future—as the railroad men are to protect their companies' interest.

A Plea for  
Co-operation

These interests are not divergent, but convergent. If I did not absolutely believe that the best interests of the railways and the city were identical on this general proposition, I should not be mixed up in this discussion at all, for I do not think I could honestly serve two masters with divergent interests. Hence it is that I am here, not to urge my plan or anybody else's plan; not to condemn the Pennsylvania plan or any other plan, but to plead for co-operation. I insist, because I know whereof I speak, that it will be a bad day for the city and, therefore, a bad day for the railways, if the various roads go ahead with the development of their own properties without reference to each other or the city's growth and needs. In other words, as I have said many times, there must be co-ordination and correlation of the various transportation facilities—first, as between themselves; second, as between these facilities and the city's transportation facilities, whether by streets, subways, elevated

## THE RAILWAY TERMINAL PROBLEM OF CHICAGO

railways or water. At the present time, through this very lack of correlation, there is a serious economic waste, which falls not only upon the transportation companies but also upon the public.

Intensive  
Development  
of Railroad  
Property

As has been pointed out, the railways own about 250 acres of very valuable land close to the center of the city. They did not steal it. They paid for it—in many cases, good round prices. This has been alleged to be worth \$200,000,000 and has been spoken of as a Chinese wall against the city's future growth and development. Now, I contend that the railways have precisely as great an interest in developing this property intelligently and intensively as the public has. The public complains—and not unnaturally—that this property is used by the railways, not only so as to render a comparatively meager return to its owners, but in such a way that it is an actual detriment to all surrounding or adjoining property.

The problem of the railways and of the city alike is the intelligent development of this immense area now devoted wholly—but, as I think, very improvidently—to transportation needs. Instead of making better use of what we already have, my friends of the Pennsylvania have proposed a plan which requires devoting some 15 or 20 more acres to this railway use, and if the other groups follow this example, it is not unlikely that the aggregate area added to this already large figure will be 100 acres. The Grand Central Station in New York handles more people daily and has more train capacity than the aggregate of all the six stations in Chicago, yet it could readily be duplicated on the land of the Western Indiana Company and its allied lines between 16th Street and Polk street. I say that that is not an intelligent use of our resources. The area in the center of a big city is limited; it cannot be added to except skyward, and additions in that way make the congestion on our already crowded streets unbearable.

How to Solve  
the Problem

What can we do about it? The city authorities are in control. The railways cannot act without their sanction. The Council may directly, or through one of its committees, properly lay down certain specifications which the railroads must comply with and give the roads a reasonable time to bring in a properly co-ordinated and correlated plan. It is natural that the roads wish to act independently. Consulting other people's whims and prejudices is always laborious and irksome. How much easier to decide for one's self what should be done, and do it! But still the railway presidents are reasonable men. They will co-operate in the preparation of a plan if the city authorities take a decided stand. No committee of engineers outside of railway service knows this problem as the railway men know it,

## THE NEED OF RAILROAD CO-OPERATION

and railway men can work out a plan if it is required. It will be time enough for the city to appoint a commission of engineers if the railways fail to bring in a solution to the problem complying with the city's specifications. The problem of handling through freight around Chicago is in a fair way of complete solution by the co-operation of a dozen of the more important lines. Why cannot there be a similar co-operative solution of the downtown terminal problem?

The following data may be of interest in connection with the Chicago terminal problem.

There are seven main railway entrances to Chicago, three from the south paralleling respectively Canal street, Clark street and the Lake front, one from the southwest along Archer avenue, two from the west—one along 16th Street, the other along Kinzie—and one from the northwest paralleling Milwaukee avenue.

Railway  
Entrances to  
Chicago

The freight business is of much greater monetary importance to the railways than the passenger business.

Freight

I estimate that the railways now bear an expense of not less than \$250,000 per annum for moving through passengers and their baggage from one depot to another, and at least double this amount for the transfer of less-than-car-load freight from one station to another. This handling of passengers, baggage and "l. c. l." freight is not only expensive and inconvenient, but it contributes in no small degree to the congestion of our downtown streets.

Transfer Cost,  
Freight and  
Passenger

Of the passenger trains operated in the city daily, approximately two-thirds are for through service, the remaining one-third for suburban. The suburban passengers, however, make up two-thirds of the total number, although they are carried on one-third of the trains.

A Comparison  
Between Through  
and Suburban  
Service

The suburban business, if charged with its per capita or per train share of fixed charges on terminal facilities, is very unprofitable. This is a serious fact alike for the railways and the city authorities, and, if possible, should be remedied. On such a basis the railways would never care to encourage suburban business.

Through service and suburban service may be compared as follows:

1. The through passenger business requires terminal facilities, whereas the suburban passenger business requires no terminal, but does require adequate means for the distribution of passengers.

2. Through passengers arrive and depart from trains usually with more or less hand baggage and generally take some conveyance. Hence, a difference of two or three blocks in the location of the station is of little consequence in this day of traffic access with

## THE RAILWAY TERMINAL PROBLEM OF CHICAGO

ready local transportation facilities within the city. Suburban passengers, on the other hand, carry no hand baggage and usually walk. They must be delivered as close as possible to their work without additional expense for transportation.



## VII. BROAD ASPECTS OF THE TERMINAL PROBLEM IN CHICAGO: A SUMMARY

ADDRESS BEFORE THE CITY CLUB, JUNE 10, 1913, BY MR. GEORGE E. HOOKER, CIVIC  
SECRETARY OF THE CITY CLUB OF CHICAGO



IN considering a fundamental subject like Chicago's railway terminal problem, we should first ask what are some of the large improvements, aside from transportation, which we wish to see accomplished for the city as a whole. We should like to see the downtown district made more orderly and elastic. We should like to see single family dwellings multiplied instead of flats, so that people desiring them could have gardens in the rear of their houses. We should like areas now unoccupied to be laid out in general on more spacious and idealistic lines than are usually followed now. We should like to eliminate smoke. We should like to secure the most advantageous conditions for factories and the most favorable relations between industrial districts and residential districts. These desired reforms can only be obtained on the basis of proper means of communication.

Func  
Com  
Need:

We wish, therefore, to secure expeditious means of passenger and freight communication at reasonable cost and such as will conserve the amenities both of transportation and of the city as our working and dwelling place. How is this rapid transportation to be obtained?

Rapid  
Transportat  
Essential

Rapid transportation might be provided by subways but we do not wish, if it can be avoided, to travel back and forth in the twentieth century underground—as ants do—beyond the direct play of air and sunlight. We know that once we begin to put passenger traffic underground, as Boston did about twenty years ago, we shall be likely, as Boston did, to keep extending that expensive and unsatisfactory system. We ought to plan for travel entirely in the upper air if possible, and if not, then for the least possible amount of travel underground.

Subways  
Should be  
Avoided

Another means of rapid transportation today is the automobile. The automobilist killing or maiming many victims and kicking his dust and smoke in the face of the other fellow, is the only one who can today get back and forth with ease over the great distances of greater Chicago.

The  
Automobile

The democratic street car—if it moves through the streets fast enough to cover in a reasonable time the great distances to be

## THE RAILWAY TERMINAL PROBLEM OF CHICAGO

Street Cars

covered—is likewise very dangerous and noisy, and subjects passers-by as well as the adjacent occupiers to an almost continuous cloud of dust.

Elevated  
Railways

Even the elevated lines, with their limited mileage, frequent stops and noisy structure, are an inadequate means of popular fast travel for the distances of Chicago and its suburbs. In this connection let me say that elevated railroad structures need not be of the noisy and ugly sort common in Chicago. We have already begun to improve the form and reduce the noise of some structures of this class, and other cities have attained great success in this direction. Paris has for many decades carried steam railways across the Seine on a structure which is beautiful to behold and largely does away with the noise of trains. A recently constructed portion of Boston's elevated electric railway is an admirable demonstration of the fact that an elevated structure for railways need not be offensive either to the eye or the ear. What form of transportation then seems best to fit the local needs of Greater Chicago? The steam road, with its own special, well-built, permanent way, now largely elevated above the streets and thus available for safe rapid movement, appears to me to be the only widespread system of transportation ways adequate to serve as the main factor for Chicago's unusual passenger transportation requirements. These requirements are unusual because the city itself stretches for twenty-six miles along the lake, while with its suburbs it reaches forty miles westward and sixty miles along the water front. Yet all local passengers who would use steam roads for journeys between the north and the south divisions of this great area or—with slight exceptions—between either of those and the west division must now break their journey at the center of this city, make connections on foot, or by cab, street car or elevated line, and take chances on finding convenient trains to complete their journeys. The added waits, stairs, tickets and other rigors involved in these connections are such that passengers do not use the steam lines for such journeys. Furthermore no steam line, except the Illinois Central, can land a passenger at more than one point in the central part of the city, whereas the business district stretches three miles north and south. As a result, largely, I think, of these conditions and despite Chicago's peculiar needs as indicated, the steam railroads of Greater Chicago carry less than one-fifth as many passengers as do those of Greater Berlin. Even those of Boston carry more than do those of Chicago.

Travel on  
Steam Lines  
interrupted at  
Business Center

The freight performances of the Chicago railroads are still more conspicuously deficient. Three full days are now required on the

## SUMMARY

average to get a freight car through the Chicago district, and a very large amount of less-than-car-load freight has to be transferred from one line to another by being carted through the downtown streets—a serious operating and financial handicap to commerce.

Through  
Freight Service  
Inefficient

Nor are these passenger and freight conditions due to an insufficiency of transportation lines or to an insufficiency in the sums paid for transportation. We now have within the city limits 2,200 miles of steam railroads—single track—155 miles of elevated railways and 900 miles of surface street railways—amounts not equaled in any other city of the world. Mr. Frederick Rex has estimated, too, that Chicago pays for passenger travel alone per year the enormous sum of approximately \$63,000,000. I cannot state the amount paid for freight transportation, but it is much greater than it should be.

Cost of  
Service High

These costly and injurious conditions of passenger and freight transportation—conditions both suffered and paid for by the public—are due primarily to a lack of organization of the steam railways of the city and a lack of proper co-ordination with elevated and street railways.

So far as passenger traffic is concerned the fundamental difficulty in Chicago's terminal problem is the fact that we have steam railroad terminals as such at all. They generally constitute an unfortunate feature of railway travel wherever found, a feature which means discontinuity where continuity is desirable. They ought, wherever practicable, to be superseded by linking up the lines which enter them into continuous routes with proper stations—*but with no terminals*. Chicago, with its six independent steam railroad terminals in and around the business district is a conspicuous example of this need.

Terminals Should  
Give Way to  
Through Routes  
for Steam Lines

We may note how this need for through connections has been met or recognized in respect to other transportation factors in Chicago than steam lines, viz. streets, street railways and elevated railways.

Provision for  
Through Streets

We are trying to connect into a continuous system our old turn-pike roads, which come in a certain distance toward the center of town and stop. The Commercial Club's "Plan of Chicago" suggested an elaborate scheme of new streets and widened streets in the heart of the city to make a connected system of main streets which should be continuous through the heart of town and thence outward.

Although the first street railway ordinance, that of 1858, was apparently framed on the theory that there should be one connected street car system for the whole city, somehow that plan was



## THE RAILWAY TERMINAL PROBLEM OF CHICAGO

Through Street  
Car Routes

not followed, and we soon had the lines of the north, the west and the south side system, respectively, coming into the center of the city and there reversing, with no connection between the lines of the different systems—and, therefore, no through routes. The “settlement” ordinance of 1907, as one of its chief merits, provided for twenty-one such routes, but these have not been put into full *bona fide* operation. That is why we still have lines of cars backed up on Clark street, south of Washington, at the rush hour and thus an apparent excuse for not operating more cars.

Through Routes  
for Elevated Lines

The elevated lines were operated on the same switch-back terminal principle until Mr. Yerkes about fifteen years ago built the “loop,” connecting the downtown stub-end stations and thus making transfers possible between the different elevated lines. The elevated loop, however, as at present operated, while better than a series of stub-end stations, is still a terminal, whereas what we want downtown on the elevated system is not terminal operation but through-route operation. After years of agitation for such operation, we hope we are now about to secure it—at least in a partial way.\*

Steam Railway  
Through Routes  
Urgently  
Required

Through routes on the steam lines have not yet become the subject of general agitation. In Chicago we still have the terminal system for all steam railways without exception—and we have the “terminal” problem. Yet in my opinion through routes on the steam railways are, if possible, more urgently required, at least for passenger traffic, and would prove more beneficial to the public, than on any other class of railways in the city. The most permanent solution of the terminal problem would lie along the line of eliminating downtown terminals as such. The short-sighted policy of multiplying great passenger and freight terminals haphazard in and around the center of the city wherever spots can be found for them will ultimately suffocate that center by strangulation, and leave the general public less adequately supplied than ever with transportation service.

Origin of the  
Terminal  
Idea-London

Where did the terminal idea for steam railroads come from? Railroads developed first in England, and London was the first great city into which they made an entrance. They pushed their way in there as far as they could from various directions, and when they could get no farther they stopped and built terminals. The need, from the standpoint of transportation for continuing these lines through the city and connecting them for through-route operation was recognized and a royal commission was appointed to report

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\* An ordinance for a limited through route service on the elevated lines was passed by the Council July 21, 1913.

## SUMMARY

on the advisability of allowing this to be done. In 1846, however, the commission reported adversely and we can well understand the impracticability of carving channels for railroads above ground through that historic city, or of doing so underground at that primitive date. Terminals were, therefore, built and multiplied, and became fixed physical factors, to which subsequent transportation developments—usually carried out in a piecemeal manner—tended to yield or conform. The famous and chaotic network of London's underground railways—begun as a means of transfer from one terminal to another—is the natural and necessary result of the failure to join the various steam lines together into a through-route system.

Paris, with its steam railway terminals mostly located a mile or more from the center of the city and with its “metropolitan” system of underground passenger railways, presents practically the same story. Paris

An entirely different development, however, occurred in Berlin. The five or six railway lines entering that city in 1846 from different directions terminated at different points distant from one to three miles from the center of the city. The need of hitching the lines together through the city was felt, however, and a few years later they were so connected, but by running them through the city streets. This invasion of the streets was later found so objectionable that, about 1870, the tracks were taken out of the streets and the lines left terminating again at the original points. This condition was not satisfactory, however, and in 1881 a four track connecting link built on embankments and permanent arches, so as to cross over the streets—was carried right through the heart of the city—hitching together the lines from the east and those from the west. This link—called the *Stadtbahn*—is seven miles long and has twelve stations. Two of the four tracks are for long distance and two for local and suburban trains. Long distance trains stop at five of these stations, local and suburban trains stop at all. Outgoing long distance trains for eastern lines make up in a coach yard in the outskirts of the city—near the western end of the link—and then run east, stopping at the five stations. Outgoing long distance trains for western lines operate similarly in the opposite direction. Incoming long distance trains reverse the process. Local and suburban trains transverse the link and pass out at either end on lines in different directions, including a northern “ring” and a southern “ring,” developed primarily, however, as freight “belts.” Berlin

This seven-mile, four-track, twelve-station link, serving to carry

The Stadtbahn,  
Berlin's Efficient  
Through Route  
for Steam Lines

## THE RAILWAY TERMINAL PROBLEM OF CHICAGO

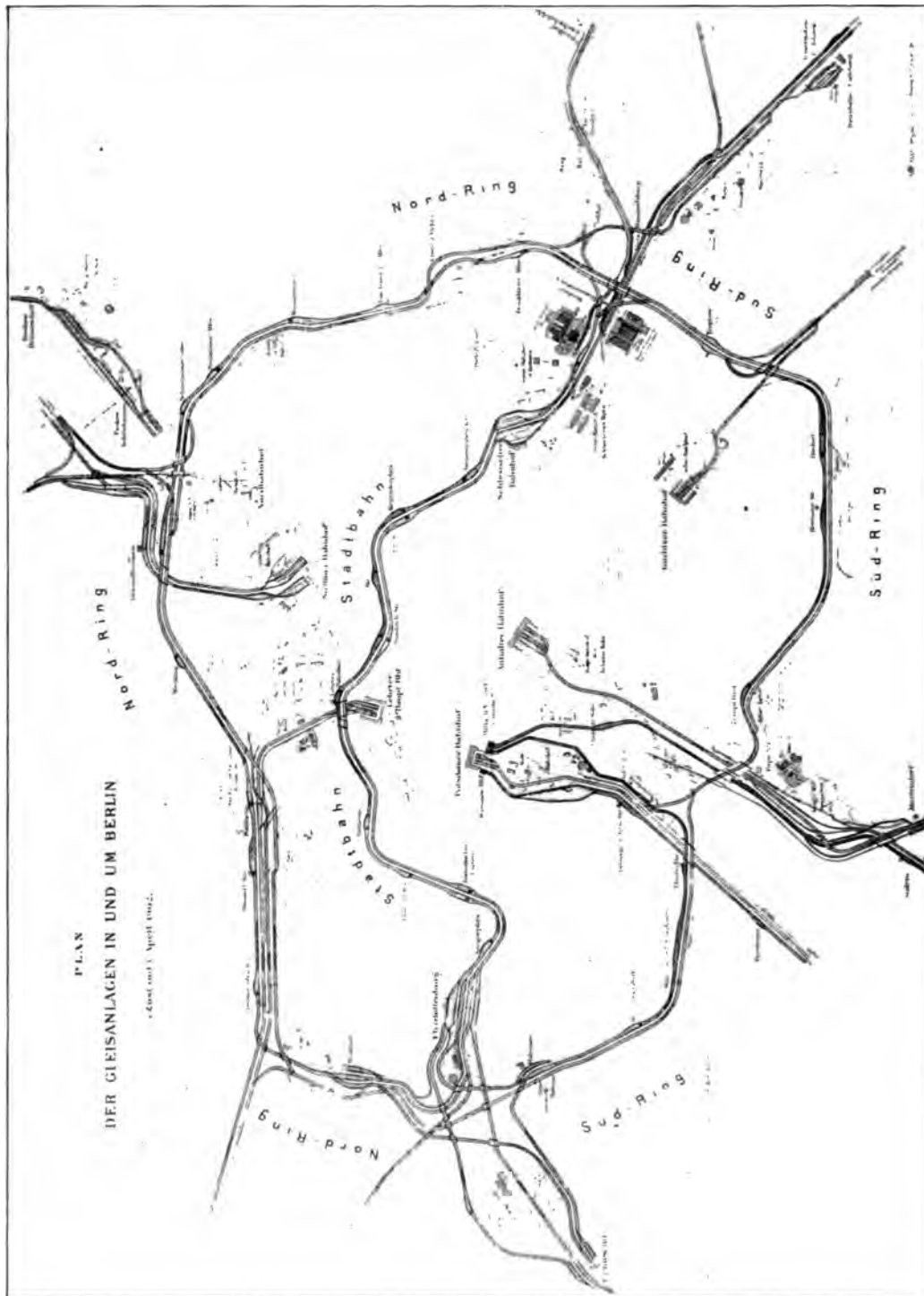


Plate 32.

### MAIN RAILWAY SYSTEM OF BERLIN

The distinctive feature of the Berlin railway system is the Stadtbahn, an elevated railway for steam lines --- soon to be electrified --- passing east and west through the heart of the city. This "through route" railway has been highly developed for local and suburban traffic. It is said to carry fully as many passengers as are carried by all the steam railroads of Greater Chicago.

All plans for the improvement of Greater Berlin contemplate the connection of the present north and south stub-end terminals shown on the above map.

## SUMMARY

the main railway service and a local and suburban service of the same standard, directly into and through the heart of the city, without crossing streets at grade and still in the open air and sunlight, is to my mind, in principle and practice, the most satisfactory example of urban passenger transit in the world. Its practical value is evidenced, too, by the fact that it receives at its twelve stations as many passengers as do all the steam railroads of Chicago put together. It is now to be electrified.

The lines entering Berlin from the north and from the south have never been thus linked up and they still end in terminals several miles apart. The chief feature, however, of the premiated plans in the 1910 competition for plans for the improvement of Greater Berlin was the recommendation that these lines be likewise linked up.

I have given this story of the Berlin Stadtbahn because of its typical importance. A less successful, because more timid, application of the same principle is found in Vienna. The principle has been applied to a degree and successfully in Hamburg. It is applied to a degree in the new railway station at Copenhagen. It is being applied in the city of Brussels at the present moment. The railroads entering that city have long been assembled in a northern station and a southern station, about  $1\frac{3}{4}$  miles apart. They are now being connected by an underground link with an additional station midway.

Other  
European  
Cities

Boston furnishes an interesting instance in this connection. In 1865, the railroads entering Boston ended in nine different terminals. By 1898 all the railroads entering the northern half of the city had been brought into the "North Union" terminal and those entering the southern half had been brought into the "South Union" terminal. The admirable report of the Boston Metropolitan Improvement Commission—prepared in 1909—recommended, as the next logical step, a connecting tunnel link, with an additional station midway, to join the tracks of these two terminals. This plan would make possible long distance train operation after the Berlin plan described. It would make possible the operation of long distance trains through Boston, if desired—say from Portland or the White Mountains to New York. It would make possible a shuttle local and suburban fast service, touching the business heart of the city at the three stations.

Connecting  
Boston's  
Terminals

The scheme is thus described by the commission in its report:

The plan of our engineer for bringing Boston passenger terminals to the modern standard of requirements includes the following cardinal features: (1) Necessary

## THE RAILWAY TERMINAL PROBLEM OF CHICAGO

revision of the South Station and a complete reconstruction of the North Station on their present sites in such a way as to bring all passenger trains into each of these stations on a subsurface level. \* \* \* (2) The establishment of a direct connection by a four-track tunnel between the two stations thus reconstructed. (3) An additional subsurface station in the market district. \* \* \*

This plan may appear radical and far-reaching, but it seems to present the most practicable and final solution of the passenger terminal problem so far as it relates to the present steam railroads. The successful installation of this plan would obviate all the present cumbersome and dangerous shifting movements of trains at the various stations, and would result in a flexibility of operation and a measure of convenience to the general public far in advance of anything which Boston has heretofore enjoyed in that regard.

\* \* \* \* \*

*Terminal Features of Operation Eliminated.*— With a connection between the two stations, and all platform tracks in each train room leading into the connecting tracks, every train movement would become a forward or through movement, provided the locations of the present terminal yards for the storage, cleaning and turning of terminal equipment were transposed. That is, trains from the Boston & Maine system would proceed through the city and the South Station into terminal yards on the New Haven property adjacent to South Bay. On the other hand, trains from the Boston & Albany and the New Haven system would proceed to a terminal yard on Boston & Maine property north of the Charles River.

\* \* \* \* \*

In so far-reaching a matter, action by the railroads themselves on their own initiative, or effective co-operation among them, is extremely unlikely. This is especially true where there are so many companies owning or operating railroads entering the city. Public direction with railroad co-operation offers the most promising solution of the problem.

\* \* \* \* \*

One fact stands out paramount to all— the necessity of concerted action to the subjugation of selfish motives. In no other way can an enduring system be planned and much less executed. The unity of the entire problem must be accepted as the foundation whereon the superstructure is to be erected and knit together into a homogeneous system.

The Pennsylvania Railroad, too, has abandoned its old Jersey City terminal and now runs straight across New York City, housing its new passenger terminal midway and its passenger coach yard in the outskirts of the city at Sunnyside, Long Island.

I do not contend that terminals should be everywhere superseded or modified by carrying railroad lines through existing cities. I only contend that, where this is practicable, it is desirable from the standpoint of transportation and elasticity in city growth. I think that Chicago, including suburban area, is, because of its wide territorial expanse, especially in need of popular transportation facilities of the standard of speed and comfort represented by the steam roads—presumably soon to be electrified—these facilities being conveniently and directly accessible to patrons at moderate cost of time and money.

If existing railroad properties could be utilized and developed in a co-operative manner, it ought to be possible, with the physical connections which actually exist between the railroad tracks of the

Through  
Operation by  
Pennsylvania  
Railroad in  
New York

Steam Railway  
Through Routes  
Needed in  
Chicago

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city now, to work out at a reasonable expense through-routing improvements which would be of very great advantage to the traveling public and probably to the railroads also. Anyone who will observe, for example, a map of the steam lines now entering the Union Station will note important possibilities in the direction of utilizing, for through-routes, lines already physically connected. It would also seem possible, for further example, by bridging the river and utilizing rights-of-way already occupied by their companies, to establish a through-route service between the Illinois Central and the Northwestern. In any event, these and other perhaps more important possibilities of the same kind should be investigated in dealing with the terminal problem and their importance determined.

Could be  
Developed with  
Present  
Facilities

Further objections to central railway terminals in a great city might be mentioned, especially in view of the great size to which they are—and of necessity—increasing. They not only turn the streets which must pass under them into tunnels several hundred feet long, but they mean a burdensome amount of walking for the passenger. Says a recent magazine article:

Great Size of  
Terminals  
Objectionable

In such a station as the South Station, in Boston, it is necessary for a person purchasing a ticket and checking baggage to walk approximately 1,100 feet from the main entrance before entering an express train; in the Grand Central Station, in New York, about the same distance; in the new Chicago and Northwestern Station, in Chicago, about 940 feet plus a 20-foot stair climb; in the Union Station at Washington about 1,200 feet and in the Pennsylvania Station at New York, from 480 to 950 feet, according to the entrance used.

That doesn't seem to be efficient transportation.

These terminals are also so enormously expensive that we can scarcely afford to use them, at least, for local travel. The same magazine article says:

Cost of  
Terminals  
Excessive

The fixed charges, taxes and operating expenses of one of the largest terminals for each train run in or out of it are \$9.09; for another \$11.55; for still another \$14.35; and for a fourth \$18.45. How can we afford to add these charges to local tickets?

The inefficiency of the existing steam railway terminal situation in other directions is also marked. Mr. Frederic A. Delano stated the other day before this Club, that the railroads pay three quarters of a million dollars a year for transferring passengers and less-than-car-load freight between their various lines in the heart of the city. That sum is interest on quite an investment and it gives poor results. If you will look inside one of the great passenger terminal train sheds you will find many trains standing idle or many tracks unoccupied. In front of the station you may find transfer busses occupying the

Terminals  
Create Necessity  
for Supplementar  
Transportation

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streets and waiting perhaps five minutes, perhaps thirty minutes, for a load of passengers. You may find street cars in some instances standing idle several minutes at the end of the line facing the terminals and waiting. A passenger terminal as such means wasted space and inefficient transportation results. The downtown freight terminals, too, as operated, represent not only extravagance, considering the value of the sites, but also inefficient transportation, and unfortunate burdens upon the streets in the heart of the city.

As bearing upon the necessity of dealing with the railroad terminal problem in a comprehensive and not a piecemeal manner, I wish to refer to two other matters. One is the effect of the present situation upon the street system, especially in the central district. The other is the necessity of simplification of our railroad network if electrification is ever to be had.

Chicago Railways  
"Butcher"  
Street Plan

The present method of railroad occupation and operation in the central district is not only inefficient for railway transportation but it involves serious interference with the street system. It may properly be said to have "butchered" the street plan around the heart of Chicago. In the district from Halsted street on the west to Michigan boulevard on the east and from 22nd Street on the south to Chicago avenue on the north, a district  $1\frac{1}{2}$  miles east and west and 3 miles north and south, there should normally exist 19 north and south streets and 31 east and west streets running through the district—a total of 50. Owing to this railroad occupation, however, there are as a matter of fact but 5—or the equivalent of 5—through north and south streets and 14 through east and west street—a total of 19. The district is thus short 31 through streets.

Streets Narrowed  
at Viaducts

Nearly all of the through streets which do exist have been choked down in their capacity by the narrowed viaducts carrying them over the large railroad holdings in the central district. Harrison street, for example, although the only through east and west street between Van Buren and 12th—a distance of over half a mile—is only wide enough, at the viaduct, for two street car tracks.

Railroad  
Interference with  
Street Levels

This railroad occupation has also interfered with street levels. The grades of practically all the through streets mentioned have been raised above or depressed below their natural level at one or more points in this district by the railroads passing under or over them. Many important streets pass over railroads at one point and under railroads at another point close by. Halsted street, for example, between Kinzie street and Chicago avenue, passes over one set of railroad tracks, under two other sets and then over another set. Polk street is raised over railroad tracks until it actually comes

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to an end—to a “jumping off” place—at the west line of 5th Avenue, and then a block east it is depressed several feet to pass under the Rock Island terminal. Taylor street shows similar conditions.

This branch of the subject is, I fear, more important and urgent than is generally realized. The mixture of levels, as between railroads and railroads, railroads and streets, and streets and streets, which now exists and is being extended and aggravated, especially in the central part of the city, is to my mind one of the most alarming aspects of our whole transportation and city planning problem.

In 1882, the City Council, on recommendation of its specially created terminal commission, adopted the so-called track elevation policy—the policy of raising the steam railroad tracks above the streets—to eliminate grade crossings, and a large amount of track elevation has since been carried out. During the last few years, however, especially in the central district, that policy has been not only neglected but conspicuously violated, and further violations are involved in various railway terminal plans now under consideration.

Mr. Lyman E. Cooley has called attention to the great economic advantage which, from the standpoint of transportation, Chicago enjoys in its level site. There is indeed no other great city of the world where one horse should be able to accomplish as much in load and distance as in Chicago. This advantage, however, has been very seriously reduced by the number of cases where streets have been raised above their natural grade in order to carry them over railroads, or where they have been depressed below their natural grade to reduce the extent to which railroads crossing over them need be elevated. I doubt if the extent to which this invasion of the street system has gone and is being proposed at the present time is generally understood.

To afford some indication of what is going on in this direction, Mr. Charles K. Mohler, civil engineer, prepared last year for the City Club Transportation Exhibition a map showing the extent of such invasion in the area between Chicago avenue on the north, 26th Street on the south, the lake on the east and the city limits on the west. This map shows that there are in that area a great number of grade crossings still existing, many streets closed for a distance varying from a block to a mile in length by railroad occupation, many streets raised above their natural level in order that railroads might cross under them, and many others depressed below their natural level in order that railroads might cross over them at an insufficient elevation. In the district, for instance, west of the new

Grade  
Crossings



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Northwestern passenger terminal, a district lying mostly within a mile and a half radius of the City Hall, there exists a condition of disorder in levels little appreciated by the public generally. This condition involves the turning of important streets into hurdle races by carrying them over railroad tracks here and then under railroad tracks there. It involves twenty-odd crossings of streets at grade by groups of from four to sixteen steam railway tracks, both passenger and freight. This situation, too, was not only left existing but was permanently locked down, as it were, upon the neighborhood by the new Northwestern passenger terminal and its approaches. These facts only disclose again how a professedly great public improvement may be so designed and carried out as incidentally to cause irreparable harm. It indicates how unwise it is to determine upon important individual transportation improvements without due reference to their relations to other factors involved in the case and needing to be taken into account.

Now as to the electrification of Chicago's steam railways.

Electrification  
Cost Prohibitive  
without Railroad  
Reorganization

If electrification is ever to be possible—and an ordinance providing for the smokeless operation of railways by July, 1915, is now pending before the City Council—it can only be afforded on the basis of a reorganization of the steam railway properties of the city, involving the concentration of lines and the rearrangement of our entire network of main roads. Whether the cost of electrification under proper conditions would or would not be prohibitive, no observer can doubt that it would and ought to be prohibitive for the disordered and excessive network of Chicago railways which now exists. There are seven great railway entrances and 2,200 miles of steam railroad tracks in Chicago—an amount excessive in comparison with the mileage of any other great city. Half of this, by proper concentration of lines, could be dispensed with, not only without injury to the railroads, but with an increase of efficiency, and made valuable for other uses—and the cost of electrification would be correspondingly decreased.

Chicago's  
Disordered  
Railway  
Network

In order better to appreciate the disorder and excessive mileage of our railway network, let us revert to the manner of its origin. In 1850 there was one railroad line—now a part of the Northwestern system—in Chicago. Ten years later three trunk lines had been added, all approaching from the south of the city and each entering a separate downtown terminal. Now any schoolboy would see that, granted that there should be a separate terminal for each line, the line which, in approaching the city, ran nearest the lake ought to enter the downtown terminal nearest the water front, that the line

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which ran next nearest the lake should enter the terminal next nearest the water front, and that the line which ran farthest from the lake should enter the terminal farthest from the water front. It was not so done, however. Instead, the line running nearest the lake entered the terminal farthest from the water front; the line running farthest from the lake entered the middle terminal, and the line running next farthest from the lake entered the terminal nearest the water front. This competitive process, begun at the beginning of our railroad building and continued to the present day, has given us 26 railroad lines, under forty different companies, big and little, operating nearly 4,000 miles of track in the Greater Chicago district. The resulting network is characterized by inefficiency and waste and exercises a depressing influence upon many residential areas in the city. Its disorder, danger and inefficiency are indicated by the fact that according to calculations by Mr. Mohler in 1911, it involved 282 cases where one railroad track crossed another, all but 39 of these being crossings at grade. Is there any doubt that the cost of electrifying this enormous and complicated network as it exists would be such as to preclude its possibility?

With the necessity of this extensive reorganization in view we cannot afford to lavish money upon grandiose station head-houses, erected for competitive advertising, and paid for, of course, by the public, and strongly contrasting with their ugly, dilapidated and squalid surroundings. Nor with electrification in view can we allow such reorganization as electrification inevitably presupposes to be unduly prejudiced by a too hastily or too narrowly considered plan for any improvement which should conform and fit into such reorganization. The project of shortening by a few months more or less the use of the existing Union Station should not excuse to any public spirited citizen such consideration, and selfish urgency has no rightful place before the public in a matter of such scope and gravity. The proper course in respect to the Pennsylvania terminal proposals should be worked out in recognition of these considerations.

City's Rights  
Should be  
Carefully  
Safeguarded

We may now review very briefly the various suggestions that have been made in recent years for dealing with the railroad terminal problem in Chicago. The first which should be noted was made by the Terminal Commission of 1892. The special object of this commission was to find a way to eliminate crossings of streets by railroads at grade and it recommended track elevation. It also made this reference to the terminal problem, viz.:

The Terminal  
Commission  
of 1892

Your committee would suggest that, in order to avoid the construction of an elevated railway for each of the railroads, they should be combined into three

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groups of elevated railroads, one entering the city from the southwest, one from the west and one from the north.

\* \* \* \* \*

The lines in the Southern District, so-called, could stop at 22nd Street, and join in the erection of an elevated union passenger depot \* \* \* thus relieving a large amount of property lying north of 22nd Street, now used by them, and which is demanded at the present time for business purposes, and relieve the city from the necessity of constructing the extremely high buildings now in the course of construction on account of the circumscribed area to which business is confined at the present time.

That is a very interesting suggestion to have come twenty-one years ago. Apropos of it let me say this:

I think there are two functions that a railroad passenger station should perform. One may be called the personal function—facilitating passengers in getting on and off the trains, providing for checking baggage, providing for sleepers waiting to be picked up later, and for other conveniences which necessarily go with an important passenger station. The second function may be called the storage function. It seems to me that the first function—the space demands of which are much less than those of the other—should be accommodated in the heart of the city, and the second, by space outside the heart of the city—farther away probably than 22nd Street.

The Terminal Commission perhaps thought that, in order to get the storage function away from the central part of the city and free the land there for other uses, they must take the railroads entirely out of the central district. But it may not be necessary to do that. We can have these steam roads running through the central part of the city with a few intensively used and properly constructed tracks which need not spoil their neighborhood, even if above the surface, and which, if properly located, may be of the greatest service for traffic.

The next suggestion with regard to terminals dealt with interchange car-load freight and was made by a committee from several steam railway companies in 1905. I think Mr. C. W. Hotchkiss, engineer, had largely to do with working out the report. It recommended a clearing yard for such freight outside the city limits to the southwest and a dozen railroads are now carrying out substantially that scheme at "Clearing." The prolonged difficulties of securing their co-operation, however, in this important improvement, illustrate how slowly such improvements work out when there is a lack of any authoritative unifying force to help the railroads get together. The five million dollar (\$5,000,000) gravity interchange yard built at Clearing ten years ago is finally to be applied to its purpose, after lying idle all this time. The amount of interchange freight coming

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into the central part of the city will thus be very greatly reduced.

The next important suggestion for a passenger terminal plan was made by Mr. Frederic A. Delano about the same date, 1905. He advocated pushing back all of the railroad terminals to 12th Street and placing them there side by side; also a considerable straightening of the river. He did not propose a Union Station and did propose to continue operation on the terminal principle. He simply advised assembling all the terminals side by side south of and fronting on 12th Street.

The "Delano"  
Plan

Next came, in 1909, the Commercial Club's report for a "Plan of Chicago." That report practically adopted Mr. Delano's proposal, except that, in view of the location in the meantime of the new Northwestern Station, it suggested two stations between Canal and Clinton streets and near the site of the present Union Station, for the various lines now entering that station. The terminal principle was likewise strictly adhered to.

The Commercial  
Club Plan

Next came, about the beginning of 1913, the plan of Mr. Jarvis Hunt for a union passenger station, on the loop principle, from 12th to 16th Street, between State street and the river (straightened) and for a union freight station adjacent on the south and west. He proposes in thus reorganizing the downtown railroad properties and straightening the river to rectify and greatly amplify the street system adjacent to these improvements. Mr. Hunt was, I think, the first to propose the use of the loop as a terminal device in solving the Chicago railway problem. Since then this has been advocated by several others who have proposed solutions.

The "Hunt"  
Plan

It may be of interest to note that Mr. Hunt proposes to do for the passenger railroad lines what Mr. Yerkes did for the "elevated" lines of Chicago about 1898, namely, to bring them into interchange relations by connecting them all on a loop terminal. Mr. Hunt's proposal is thus still for a terminal, but for what is now recognized to be the most efficient form of terminal, viz., a loop. He styles it a "link."

The structural unit which he proposes—over half a mile square—is a large one to introduce into the city framework, but he claims that by increasing the number of streets as proposed and by carrying them through this unit, he provides adequately for circulation.

For suburban service he proposes collateral lines, using in part existing downtown stations and a connecting circuit about the business district.

He suggests a plan also for concentrating all the steam lines upon

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three main entrances into the city, somewhat after the proposal of the terminal commission of 1892, mentioned above.

It is largely due to Mr. Hunt's forcible presentation of his ably conceived plan that a real discussion of the terminal question is being demanded and had.

Plans of  
the Union  
Station Company  
and the  
Pennsylvania  
Railroad

About the beginning of May of this year came the proposals of the Pennsylvania Railroad and the other companies using the Union Station for new passenger and freight facilities on the west side. They proposed to locate the passenger station for the use of all these roads on the north side of Jackson boulevard extending to Adams street between Canal and Clinton streets. The new freight terminal—which was proposed for the sole use of the Pennsylvania was to be between Jefferson, Van Buren, Desplaines and Ewing streets. The terminal principle is strictly adhered to. These plans differ, however, from all the others mentioned in that instead of dealing with the terminal situation on broad and inclusive lines, they propose plans devised with a view to serving their own interests and make no pretense of having devised or safeguarded a comprehensive terminal plan for the city as a whole. The two terminals, one passenger and the other freight, are proposed to be entirely separate factors, without any physical connection. The passenger terminal plans also include the location of a new post-office adjacent to the terminal.

It may be mentioned that railroad companies, in order to avoid paying boosted prices for land needed for such improvements, naturally endeavor to secure the land before announcing their purposes. Their course and the reasons for it can be understood, but their reasons are no ground for denying the public right to have the merits of the proposals thoroughly gone into, even though the land designed therefor may have been thus acquired.

Plan of the  
Officers and  
Staff of the  
Chicago Plan  
Commission

Next, and about the same time, came the terminal plans of the executive officers, engineers and architects of the Chicago Plan Commission. They propose that the Illinois Central Station be located on 12th Street south of Grant Park, that the roads now entering the Polk street and La Salle street stations be accommodated at a joint terminal on 12th Street, east of the river, and that the Union Station and the Grand Central Station groups of lines be brought into a station on 12th Street, west of the river—partially straightened. They also propose a loop scheme in two of their terminals. They propose various important street widenings and the development of freight facilities along the river with convenient interchange between land transport and water transport. These proposals likewise

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adhere strictly to the terminal principle, increasing its efficiency by loops and to the principle of having numerous different terminals, located at different points and with no physical connection with each other.

Messrs. Pond and Pond, whose plan was the next presented, deal chiefly with the passenger side of the problem—following for the most part the freight proposals of Mr. Jarvis Hunt. Roughly speaking, what they do in their passenger scheme is to transpose Mr. Jarvis Hunt's loop to the west side of the river, separate it into two loop units and stretch these out one after the other north and south for a mile or more south of Madison street between Canal and Clinton streets, narrowing the whole scheme in so doing so that the unit is only one-seventh of a mile wide, has its middle area open over streets, and involves no continuous structure more than 170 feet wide under which streets would pass. The plan also introduces a new element in the form of a possibility of through-routing all trains, whether long distance or local and suburban, and local and suburban trains are definitely designed to be so routed.

The "Pond"  
Plan

Last came the plan of Mr. William Drummond. He has from the start handled the subject of railway terminals not only as properly demanding consideration of all the railroad lines together, but also as one which should be dealt with as a part of the problem of developing the whole city, industrially, commercially and residentially, in the best manner. He does not employ loops in his downtown stations. He proposes for the use of all railroads a series of four stations a little less than a half mile apart, beginning at Madison street and running south between Canal street and the river straightened, each station serving for a certain number of roads, approximately according to the existing station groupings.

The "Drumr"  
Plan

He proposes that, if property interests can be so arranged, all long distance trains shall either run through the city and on to other points, or when incoming shall run through to coach and make-up yards across town—and reverse the process when outgoing. He proposes to develop freight handling below the surface as a part of the same scheme, and to include mechanical means of collection and delivery. He proposes to install beneath the long distance tracks a through-route local and suburban service. He proposes that the stations mentioned have outgoing long distance passenger tracks one story above the street, incoming long distance passenger tracks two stories above the street, freight tracks one story below the street and transverse local passenger lines two stories below the street. He proposes also, since Chicago is the greatest railroad town of the

